Published every Saturday by the Simmons-Boardman Publishing Company, 1309 Noble Street, Philadelphia, Pa., with executive offices at 30 Church Street, New York

CHICAGO
105 West Adams St.

WASHINGTON
17th and H Streets, N. W.

CLEVELAND
Terminal Tower

SAN FRANCISCO
58 Main St.

The Railway Age is a member of the Associated Business Papers (A. B. P.) and of the Audit Bureau of Circulations (A. B. C.).

Subscriptions, including 52 regular weekly issues, payable in advance and postage free; United States and possessions, 1 year $6.00, 2 years $10.00; Canada, including duty, 1 year $8.00, 2 years $14.00; foreign countries, 1 year $8.00, 2 years $14.00.

Single copies, 25 cents each.

Railway Age

With which are incorporated the Railway Review, the Railroad Gazette and the Railway Age-Gazette. Name registered U. S. Patent Office.

Vol. 94 May 20, 1933 No. 20

In This Issue

The Railway Age is indexed by the Industrial Arts Index and also by the Engineering Index Service

RAILWAY AGE

Government Railroad Loans and Business Revival

While a real improvement in general business is occurring, public men and business men are considering numerous means of accelerating the improvement and restoring prosperity. It is of the utmost importance that the measures adopted shall be selected with great care and due regard for experience. Otherwise, while they may prove temporarily stimulating, they may cause reactions which will prolong or renew the depression. Among the projects being considered are expenditures upon public works and loans to private industries which it is estimated will require the issuance of more than five billion dollars in federal government bonds. The proposed public works include such projects as the power development at Muscle Shoals, highway construction, river and harbor improvements, etc.,—all of which, regardless of their value, will tend to increase present excessive taxes.

Apparently the making of large government expenditures and loans in an effort to help revive business is inevitable, and, this being the case, it seems surprising that so little is being said about one kind of expenditures which could be aided by government at little or perhaps no expense to the taxpayers and which would, directly and indirectly, contribute more rapidly and extensively to the revival of business than any other single kind of expenditures that could be made. We refer to expenditures upon the railroads. Any extensive program of public works will require prolonged planning, organization and recruiting of men before the actual work of carrying it out can be begun. On the other hand, the railroads have available the plans, the organizations and the employees for immediately beginning large expenditures for labor, equipment and materials the stimulating effects of which would be felt within a few weeks by industries of every kind and persons of every class in every part of the United States.

Do Railways Need to Spend More?

Would the railways be making these large expenditures if they had the earnings or credit to do so? Is there need for larger expenditures than actually are being made upon the railroads? Only four years ago they were handling 100 per cent more freight business than they are handling now. Nothing could be surer than that as general business revives the demand for railroad transportation will greatly increase. It is increasing now. In January freight car loadings were 15.8 per cent less than in 1932; in February, 12.8 per cent less; in March, when the banking moratorium occurred, 19.2 per cent less; in April, 9.7 per cent less; in the week ended April 29, 3.3 per cent less; in the week ended May 6 only 1.8 per cent less. The general trend of freight business has been upward for nine months.

In what condition are the railroads to handle increased traffic? Statistics regarding the declines that have occurred during the depression in their expenditures for the improvement and maintenance of their properties help to answer this question, and also throw light on the effects that the reductions of railway expenditures have produced upon general business and on the effects that would be produced upon general business by an increase in their expenditures.

In the five years ending with 1929 the capital expenditures made by the Class I roads averaged $807,000,000 annually, and their expenditures for maintenance averaged $2,095,200,000, a total of $2,902,200,000 that was expended annually to maintain and improve railway physical properties. In 1930 their total capital and maintenance expenditures amounted to $2,613,000,000, a decline of almost $300,000,000 below the previous five-year average; in 1931 their capital and maintenance expenditures aggregated only $1,721,300,000, a decline of almost $1,200,000,000 below this five-year average; and in 1932 their capital and maintenance expenditures aggregated only $1,145,700,000, a decline of $1,756,000,000 below this five-year average. The decline in average annual capital and maintenance expenditures during the last three years, as compared with the preceding five-year annual average, has been $1,410,000,000; and, if the average expenditures made during the five years ending with 1929 could reasonably be taken as a measure of what

should be spent regularly to keep the railroads abreast of the demands for good and economical service, the figures would show there has accrued within the last three years a deficiency in needed railroad expenditures of $4,230,000,000. There can be no question as to what these figures show regarding the need for increased expenditures upon railway property.

How Railway Expenditures Permeate Industry

Suppose, now, that funds should be made available and the railways should begin to increase their expenditures for improvements and maintenance. Who would be the immediate beneficiaries of the expenditures? The money would be spent partly in employing some of the 700,000 railway men now out of work in every part of the country, and partly in buying equipment and materials from manufacturers, who, of course, would in consequence increase their employment. Probably no other industry buys such a diversity of products as the railroads, and probably, therefore, there is no other industry an increase in whose purchases would be beneficially felt by so many industries and so many classes of workers.

In 1929 the railways spent $321,300,000 for locomotives, freight cars, passenger cars and other equipment, and in 1932 only $36,371,000; in 1929 they spent $158,000,000 for lumber and other forest products, and in 1932 only $52,200,000; in 1929 they spent $438,000,000 for iron and steel products, and in 1932 only $101,000,000. Their purchases of miscellaneous manufactured products declined from $370,000,000 in 1929 to $114,000,000 in 1932, including a decline in purchases of cement from $7,700,000 to $1,750,000; of air brake material and other appliances for locomotives from $25,000,000 to $5,000,000; of electrical materials from $18,000,000 to $5,250,000; of painters' supplies and chemicals from $36,000,000 to $13,700,000; of ballast from $24,000,000 to $9,300,000, and so on. In these figures are to be found the explanation of a large part of the reduction that has occurred in the demand for the products of the most important industries of the country and of the unprecedented and nation-wide unemployment in those industries.

Railway Expenditures Versus Public Works

Now, a large increase in railway capital and maintenance expenditures is going to begin sooner or later. If the means for beginning it are to be derived entirely from increased railroad earnings and improved railroad credit it will have to be an effect rather than a cause of revival in other lines of business, and will have to follow, rather than precede and stimulate, that revival, because most railroads now lack the earnings and credit necessary to enable them immediately to begin substantially to increase their expenditures. As a large increase in expenditures upon the railways must be made sooner or later, if there is available any means by which it can be expedited and used to help revive business, would it not be in the public interest to use it? There is a means available, and this is the loaning by the government to the railways of several hundreds of millions of dollars of the money which it is proposed to raise by a large issue of government bonds.

The loaning of government money to the railroads to enable them to increase improvements and maintenance would have several important advantages over its expenditure for most kinds of public works. First, there would be a minimum of delay in getting the expenditure of the money started. Second, the effects of its expenditure would be felt in a maximum number of industries and in every part of the country. Third, railway expenditures of the kind being considered are of such a nature that a larger part of them goes to labor and provides employment—the main objective of the government—than almost any other kind of expenditures made. Fourth, the railways would use the money only for purposes for which they would later spend money derived directly or indirectly from their earnings, and, as they would obligate themselves to repay it, there would be a minimum of risk that it would be uselessly or wastefully expended. Fifth, the government and taxpayers will never get back any of the money they spend upon public works, while they would be practically certain to get back what they loaned to the railways. The government has been repaid practically all of the billion dollars it loaned the railways during and immediately following the great war, and has made a substantial profit on it, because the interest the government has paid on the money has been exceeded by the interest the railroads have paid the government on it.

Should Railroads Accept Loans?

Objections are sure to be made to large government loans to the railways. Many railway executives may be as adverse to accepting them as many public men may be to making them. It will be said that already during the depression the government, through the Reconstruction Finance Corporation, has loaned the railroads over 300 million dollars. Measured by the magnitude and past earning capacity of the railroad industry this is, in fact, a small amount, being less than 1½ per cent of the investment in railroad property, less than one-third as much as the net operating income earned in 1929, and less than one-third as much as the railroads borrowed from the government during the war years.

Railway executives will raise questions as to the conditions upon which loans would be made. Would they have to pay six per cent on money that the government borrows for four per cent or less, and which in many cases it is loaning to other interests for four per cent or less? Would they have to pay interest upon money borrowed to spend upon maintenance, which is an operating expense and does not properly include interest? It may be asked, on the other hand, considering the matter solely as a question of business, whether, by borrowing to make economy-producing improvements and to make needed maintenance ex-

penditures before a general revival of business causes an increase in prices, the railways may not be able to effect sufficient savings to offset a low rate of interest upon money loaned to them?

Whether the matter be regarded from the standpoint of the public or of the railroads, the main objectives to be sought are speeding of the revival of business and preparation of the railroads for handling an increased traffic with the greatest practicable efficiency and economy. If an increase in railway expenditures for improvements and maintenance would contribute more widely to a revival of business than any other single cause that can be put in operation, as apparently it would, the railroads would speedily benefit by the increase in their traffic and earnings that would result. A revival of business and increase of traffic are coming sooner or later in any event, because this country is not going to continue long on a basis of production which gives the railways only one-half as much freight business as they had four years ago, and most railroads are not in a satisfactory condition to handle a substantially increased traffic, and sooner or later will have to make largely increased expenditures to enable them to handle increased traffic satisfactorily. There is an evident determination in Washington to use large amounts of government money to stimulate a revival of business, and the less of it is spent on public works of doubtful value, and the more of it is spent to increase employment in the private industries in which the decline in employment has occurred, the better it will be for everybody.

Considering all the circumstances, the argument for the government offering to loan several hundreds of millions of dollars to the railways on easy terms, and for the railways accepting it and expending it in the near future in ways in which they would later have to spend an equivalent or larger amount directly or indirectly from their earnings, seems very strong. It seems stronger than the argument that can be made for any other use of government money to help revive business.

Canada's Railway Policy a Warning

Canada's railway bill, in amended form, has been passed by the House of Commons and now goes back to the Senate, where it originated, for approval. Under the Dominion's form of government such approval is usually granted as a matter of course; so, for all practical purposes, the bill may be said to be a law, which will go into effect on July 1.

Its principal provisions are the substitution of three trustees for the board of directors of the Canadian National and direct encouragement of co-operation between the Canadian National and the Canadian Pacific in the elimination of competition. Such co-operation may be enforced on either road by an "arbitral Tribunal" which will be set up in the event that the two companies cannot agree on any proposed measure of co-operation. The tribunals will consist of a representative from each company and the chief of the Dominion Railway Commission, who will preside. Upon the request of either railway, two other members may be added to a tribunal by the president of the Exchequer Court of Canada. In their search for economies, the railways are specifically authorized to form new jointly-controlled companies; to enter into agreements for pooling of traffic (including telegraphs and express) and earnings; to operate tracks and terminals jointly; and to provide highway services jointly or individually.

The orders of an arbitral tribunal take precedence over those of the Railway Commission in the event that they conflict. No railway line may be abandoned, however, without the consent of the Railway Commission and co-operative projects upon which the railways agree cannot be entered upon without the Commission's approval if such approval is required under existing law. It is also expressly provided that there shall be no unified management and control of the two railways. In discussing a project for co-operative action the railway managements are required to consult with the representatives of labor and to apportion employment equitably among the staffs of the two railways. In the event that jointly-controlled companies are formed to take over any existing facilities, present employees are to be given preference in employment. Unrouted export traffic entrusted to the C.N.R. in Canada must be moved through Canadian ports.

The chairmanship of the C.N.R. trustees is to be a full-time position. The trustees are to be named by the Governor-in-Council (i.e., as advised by the Cabinet), their terms of office to be five years. Whether the trustees, other than the chairman, are to devote all their time to the work is left to the discretion of the Governor-in-Council, as are the salaries of all three. The trustees are to have control of the C.N.R. budget and must pass upon estimates of sums needed to meet income deficits, to pay interest on securities in the hands of the public, for capital expenditures and to meet maturing obligations. These estimates are to be presented to the Governor-in-Council, who may approve or disapprove them in whole or in part and thereafter present them to Parliament. Income deficits may not be funded.

The bill is essentially a compromise measure lying midway between complete amalgamation of the two companies, on the one hand, and complete separation and active competition on the other. Just how far it will succeed must remain a matter of conjecture. The able managements of both properties can be counted upon to do their utmost to harmonize their operations. The vigor and skill of other elements who will control the machinery of co-operation remains to be seen, as well as the extent to which their actions and the co-operative efforts of the railway managements will command the support of public and political opinion. A

glance at the figures of the two companies for 1932, however, will show that some drastic measure for solving Canada's railway problem must be found and found quickly.

The net railway operating revenues of the Canadian National in 1932 were barely sufficient to pay taxes, and the obligation of the Dominion government for interest on railway debt in the hands of the public and for debits to "other income" accounts was in excess of 61 millions; in 1931 it was practically the same. This leaves out of account any return on the securities of the company, totaling approximately a billion dollars, held by the government, which securities do not by any means measure the taxpayers' stake in the enterprise. There is, in addition, for example, an investment by the government of some 405 millions in the Canadian Government Railways, and accumulated unpaid interest due the government totals 389 millions. The system's profit and loss debit balance at the end of 1932 was 763 millions. The conservatively-capitalized private company, the Canadian Pacific, in 1932 earned fixed charges only by a very narrow margin.

The Canadian people can no more afford to bankrupt their leading private railway than they can afford to bankrupt their government by continuing colossal deficits of the government property. The Dominion has a transportation plant far in excess of a traffic volume sufficient to permit all of it to be operated profitably. Such over-expansion of plant is the inevitable result of a policy which permits any part of transportation costs to be paid by taxpayers rather than users. Once the tiniest concession in this direction is made, the camel has his head under the tent and before long is all the way in. Shippers see someone's freight moved at the taxpayers' expense and immediately they all clamor for the same favor until they get it.

Let no American, however, point a finger of scorn at Canada in her railway troubles, since the transportation policies of our own governments are even worse. If Canada has taken millions of her taxpayers' money and credit to overbuild her railway plant, it can at any rate be said in mitigation that the transport system provided was the most economical available. In the United States there has been similar over-expansion of the transportation plant—not in railways but in waterways and heavy-duty highways which are far less efficient as means of transportation than railways.

Can a nation which consents to the canalization at public expense of such a stream as the Missouri river, where total transportation costs are many times as much per ton-mile as by railroad, look with disapproval at Canada which, even if it has provided its citizens with more facilities than they need, has at least expended its public funds for the most economical, rather than the most expensive, form of transportation? The credit of the United States government, to be sure, has not yet been jeopardized by these ventures, but in the United States most of the overexpansion in transportation has been on the part of state and local governments, and many of them, if not actually bankrupt, are compelled to curtail necessary governmental functions, such as education and police protection, in order to pay a substantial portion of transport costs of certain shippers.

The lesson to be learned from Canada's railway experience is as clear as a pikestaff: A government which takes taxpayers' money to build and operate railways is headed for serious trouble. The corollary to that lesson, which experience in the United States has just as clearly emphasized, is a caveat against the use of the taxpayers' money for the support of commercial transportation in any form.

Railroad Research

The criticism that the railways have not been sufficiently alert and aggressive in research has developed the fact that the chief difficulty about railway research is not that the railroads have ignored it but that, in contrast with some other industries, they have not publicized and dramatized it enough. Evidence of this is afforded in a recent report of the progress made by one of the large railroads in reducing equipment failures. Largely because of the constant study given to every piece of material entering into the construction and operation of trains, this road has carried over three hundred million passengers during the past five years without a fatal accident.

Nor is that all that can be said of this road's research work. There were 61 per cent fewer derailments of all kinds in 1931 than in 1929, while equipment failures in 1931 amounted to only 48.3 per billion locomotive- and car-miles, as compared with 96.0 in 1929. There were only three derailments resulting from failure of locomotive parts during 1931, while the derailments caused by the failure of car materials of all kinds numbered only 73, a figure which is remarkably low, considering the completeness with which all failures are accounted for.

Train delays caused by material failures decreased from 497 in 1930 to 411 in 1931, or 18 per cent, and the number of cases in which materials and equipment were found defective upon inspection, thus forestalling delays and derailments, totaled 2,641 in 1931, as compared with 2,960 in 1930, a reduction of 11 per cent.

These results, like similar results obtained on other roads, were due to a great deal of research conducted by the manufacturing industries as well as by the railway organizations themselves. This is the type of research which has made the railroads dependable and safe, and it is the type which railway management must encourage. Possibly those who have been so busy criticizing the railroads for insufficient research have done the roads a service by opening the eyes of railroads to their own accomplishments in scientific pursuits and emphasizing the importance of such activities.

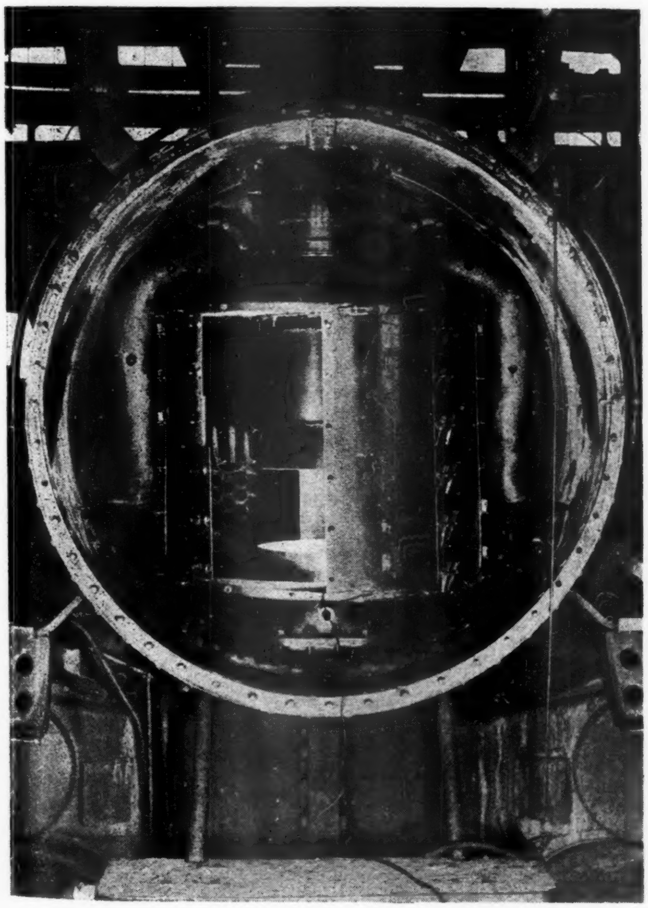
Soo Line Tests Cyclone Front End

Increase in exhaust nozzle area of 14.7 per cent is secured—Back pressure reduced 27 to 50 per cent—Sparks eliminated

THE Minneapolis, St. Paul & Sault Ste. Marie has recently completed some interesting tests of the locomotive front-end arrangement, known as the Cyclone front end and described on page 813 of the *Railway Age* issue of April 25, 1931. These tests indicate that the device functions effectively not only to prevent the emission of sparks from the smokestack but to permit operating with an appreciably larger exhaust nozzle, reduced back pressure and generally improved locomotive performance as regards hauling capacity, speed and fuel economy. The use of the Cyclone front end, as installed on the Soo Line test locomotive, permitted increasing the exhaust-nozzle diameter $\frac{9}{16}$ in. and reducing the back pressure approximately 4 lb., or 27 to 50 per cent, dependent upon the speed and cut-off. The locomotive steamed freely, maintaining an average superheated steam temperature of 636 deg. F. with a front-end gas temperature of 570 deg. F.

The Cyclone front end was originally developed on the Northern Pacific and subsequently applied to several hundred locomotives in order to permit burning subbituminous coals of the Rosebud variety without spark emission and attendant fire hazard. As described in the article referred to, the device consists essentially of a sheet-metal drum equipped with breaker strips around the interior circumference and deflecting vanes at the intake, so arranged that exhaust gases are given a centrifugal motion which delays the cinders in the drum long enough for them to be reduced in size and extinguished before being discharged to the atmosphere. No netting or similar restriction to draft is required with this construction.

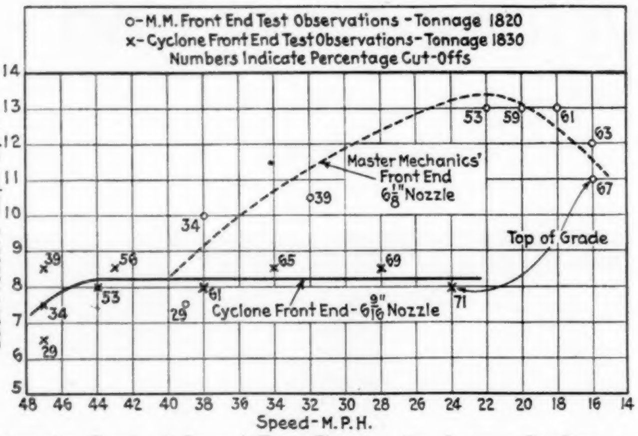
Spark-arrester Drum Before Installation in the Locomotive—View Taken from the Intake End



Cyclone Front End as Installed with One Front Section Removed To Show the Interior Arrangement

The initial Cyclone front-end design, now called the Type A, was installed with the gas intake at the front of the smokebox and usually necessitated an offset exhaust nozzle. After manufacturing rights were acquired, in 1931, by the Locomotive Firebox Company, Chicago, the improved Type-B Cyclone front end was developed, being essentially like the earlier type, except for the omission of the top head of the drum and the utilization of this space to give greatly increased spark-arrester drum volume and a larger front intake area. Moreover, it was not necessary to use an offset exhaust nozzle with this design. A still further improvement was effected with the Type-C front end used in the Soo Line tests, whereby the intake to the drum was reversed and placed directly in front of the flue sheet, thus providing a much shorter and less restricted path for the flue gases than with either of the preceding types or with the conventional Master Mechanics' front-end arrangement.

The general arrangement of the Type-C front end is illustrated. It surrounds an inside stack extension and is used in connection with a low, straight exhaust base. The spark-arrester drum is manufactured in segments, keybolted together so that it can be applied either in a single unit or dismantled, and applied section by section. It can be removed in the same way. It is manufactured from $\frac{1}{4}$-in. sheet steel and has a heat-treated steel liner $\frac{1}{4}$ in. thick carrying vertical breaker strips applied to

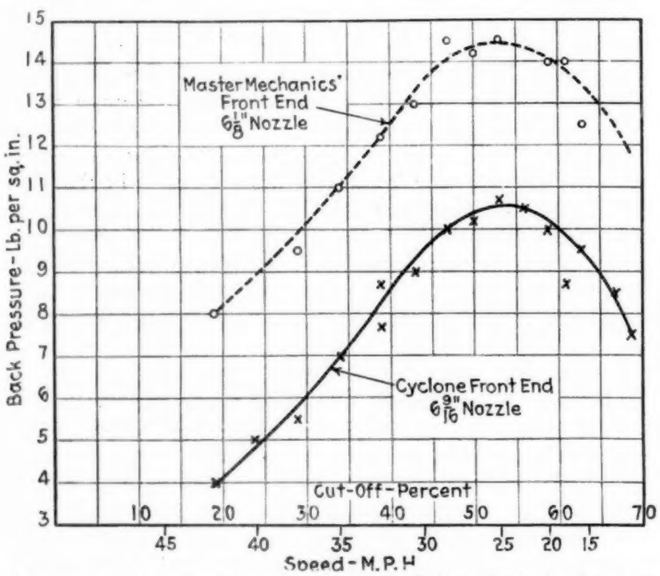


Composite Graph of Several Trips Showing the Average Readings at Various Speeds and Cut-Offs Over a 140-Mile Division

the inside surface. This liner, arranged in segments to correspond with the outer wall, is spotwelded to the walls of the drum and can be readily removed. The liner is used to prevent wear to the walls of the drum itself. A vertical baffle plate, surrounding the opening into the drum, shuts off from the draft area all of the smokebox, from the superheater header forward. This arrangement excludes all steam pipes and joints, with the exception of the superheater units, from the draft area and, therefore, minimizes the possibility of steam leaks or outside air leaks around the door ring and steam pipes interfering with the draft.

Method of Conducting Tests

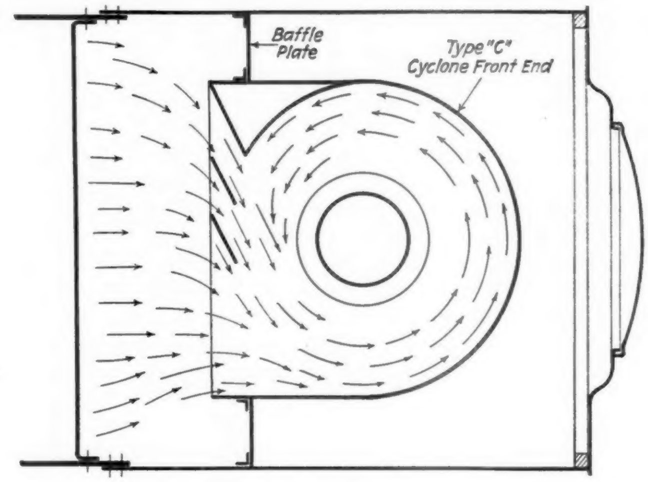
In making comparative tests of the new front-end arrangement, the Soo Line decided to take a locomotive in regular service and conduct a test first with the conventional Master Mechanics' front-end arrangement and then with the Cyclone Type-C design. A Mikado locomotive, with 28-in. by 30-in. cylinders and 170 lb. boiler pressure, was selected. In preparing for the test, the locomotive was equipped with draft gages in three places, one in the firebox, one at the front flue sheet and one inside the netting in front of the baffle plate. Provision was made to determine cylinder back pressures by means of an Ashton 30-lb. gage in the cab, equipped with a dampener and connected to a ¾-in. pipe to the smokebox with one branch just below the exhaust-



Comparative Back Pressures Developed on Ruling Grade by Soo Line Locomotive Equipped with the Master Mechanics' and Subsequently with the Cyclone Front End

nozzle tip and one to the exhaust end of the valve chamber at the right side. A pyrometer was used with thermocouples applied in the right steam chest and at the front flue sheet to give readings of superheated steam and front-end gas temperatures, respectively, by simply using a multiple-throw switch. The valve gear was calibrated and a scale made which fitted the contour of the reverse quadrant, cut-off positions being read direct by reference to the valve-travel scale. The locomotive was operated with a full throttle opening and speed controlled by cut-off adjustment.

Test runs were made between Schiller Park, Ill., and Fond du Lac, Wis., over a 140-mile division in fast



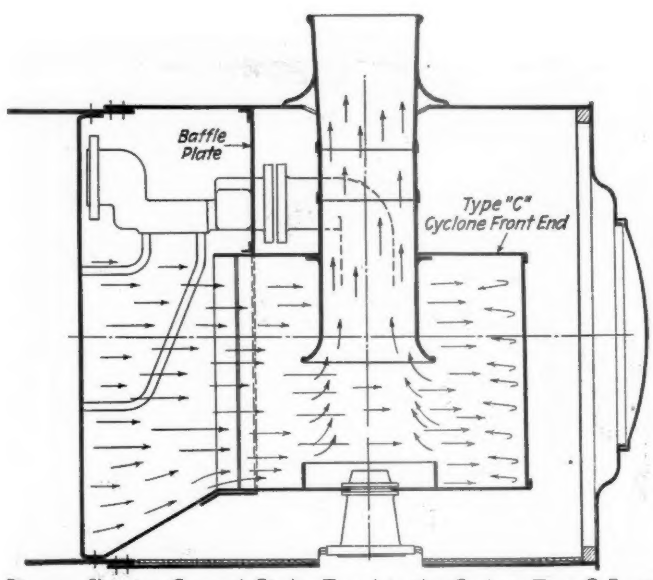


Diagram Showing Gas and Cinder Travel in the Cyclone Type-C Front End as Applied to the Soo Line Locomotive

freight service, hauling approximately 1,900 tons. The tests were conducted in the middle of the winter so that this 1,900 tons was approximately 200 tons below the maximum summer rating.

In normal service with the Master Mechanics' front-end arrangement, the nozzle tip used on this class of locomotive is 6⅛ in. in diameter with no bridge or projection of any sort. This is equal to 29.46 sq. in. of opening. The locomotive was operated on several trips with this nozzle to develop the average back pressure, superheat, and draft under normal operating conditions. Observations taken indicated that the locomotive was a "good steamer" and in first-class condition mechanically, handling the train without difficulty. Back pressures

were relatively high, however, and a loss in draft efficiency of 40 per cent between the nozzle tip and the front of the flue sheet was observed.

When as satisfactory results as possible were obtained with the Master Mechanics' front-end arrangement, the locomotive was tied up and the Cyclone Type-C front end applied. On the first subsequent trip, the exhaust nozzle tip was opened to 6⅜ in., giving an area of 31.91 sq. in., an increase of 8.3 per cent. One trip was made with this nozzle arrangement, which indicated that the nozzle was still too small, so, for the next trip, the nozzle was opened to 6⅝ in., giving an area of 34.47 sq. in., or an increase of 17 per cent. The locomotive is reported to have steamed well, possibly better than with the 6⅛-in. nozzle in the Master Mechanics' front end, but, to insure the maximum possibilities in steaming capacity and general serviceability, the nozzle was reduced to 6$\frac{9}{16}$ in., which was an area of 33.82 sq. in. and an increase of 14.7 per cent over the 6⅛-in. nozzle. After it was decided that 6$\frac{9}{16}$ in. would be the standard nozzle, several test runs were made and observations taken to determine the back pressure, superheat and draft.

One of the illustrations, which is a composite graph showing operation over the entire division, indicates the relative back pressures developed at given speeds and cut-offs between the two sizes of exhaust nozzle, or, in other words, between the two different front ends. Referring to the graph, it will be noted that, with the 6$\frac{9}{16}$-in. nozzle, the locomotive developed practically 4 lb. back pressure at 19-per cent cut-off, this back pressure increasing to a maximum of 10½ lb. as the cut-off was increased to 54 per cent, then dropping rapidly as the cut-off was further increased and the speed reduced. Under the same conditions, the locomotive, equipped with the Master Mechanics' front end and the 6⅛-in. exhaust nozzle, developed 8 lb. back pressure at 19-per cent cut-off, and increased to a maximum of 14½ lb. at 54-per cent cut-off, then dropping with reduced speed as in the tests with the larger nozzle. An examination of this graph indicates that the locomotive, when equipped with the larger nozzle, developed practically 4 lb. less back pressure throughout the entire normal range of operation, which is equivalent to a reduction of 27 to 50 per cent, dependent upon the speed and cut-off.

The other graph, illustrated, shows the relative performances of the locomotive with the two front-end arrangements on the ruling grade, as measured in back pressures, speeds and cut-offs. It is interesting to note that, with 29-per cent cut-off at the foot of the hill, the Cyclone-equipped locomotive at a speed of 47 m. p. h. developed 6½ lb. back pressure. To maintain speed on the hill, the cut-off was increased to 34 per cent and again to 39 per cent, the speed remaining constant to this point. As the increasing grade reduced the train speed, the cut-off was increased at intervals from 53 to 71 per cent at the top of the grade where the speed was 24 m. p. h. During this time, the back pressure remained practically constant at 8.2 lb., showing that the locomotive had a reserve power capacity which could have been used, if necessary.

Under the same grade and operating conditions, the locomotive with the Master Mechanics' front end developed a speed of 39 m. p. h. with a cut-off of 29 per cent and a back pressure of 7½ lb. at the foot of the grade. In an effort to maintain this speed on the grade, the cut-off was increased to 34 per cent, bringing the back pressure up to 10 lb., the speed falling slightly, however, to 38 m. p. h. As the speed continued to decrease the cut-off was increased at intervals until, at 53 per cent, a maximum back pressure of 13.4 lb. was developed at a speed of 22 m. p. h. From this point on, both the speed and back pressure dropped rapidly as the cut-off was further increased to 67 per cent at the top of the grade when the back pressure was 12 lb. and the speed 16 m. p. h. While the tractive force of the locomotive during this test continued to increase until the top of the grade was reached, the maximum horsepower was developed before reaching the top.

While the graphic charts give a visual picture of the definite improvement in locomotive performance, due to the application of the Cyclone front end, with the resulting increase in nozzle area, an additional advantage was observed in the increased smoothness of operation of the locomotive after the nozzle tip had been enlarged. In every instance, where it was necessary to work at rather high capacities, the Cyclone-equipped engine was said to work much easier, and be capable of handling increased tonnage. Less grate shaking was required and a thinner fire kept at all times, burning the same kind of fuel.

The results of these tests with the Cyclone front end, covering a period of about three months, indicate that by the use of this device, the following advantages may be anticipated: Larger nozzle area, decreased back pressure, better steaming, reduced fuel consumption, sparkless operation, no interference with draft from air leaks into the smokebox, and increased hauling capacity.

M-K-T Had Small Deficit in 1932

THE Missouri-Kansas-Texas Lines in 1932 had total operating revenues of $27,239,827, a decline of 20.78 per cent from the preceding year. Operating expenses were reduced by 21.52 per cent, however, so that net operating revenue, totaling $8,011,922, was only 18.92 per cent less than in 1931. Gross income available for interest totaled $4,230,313, which covered such requirements with $46,462 to spare. Interest on adjustment bonds, however, totaling $678,878, brought a net income deficit of $632,415, as compared with a credit balance of $675,226 in 1931.

Table I—Missouri-Kansas-Texas, Revenues and Expenses, 1932 Compared with 1929

	1932	1929	+Increase or –Decrease %
Freight Revenue	22,151,230	44,619,989	–50.4
Passenger Revenue	2,281,146	6,206,420	–63.3
Total Operating Revenue	27,239,827	56,024,439	–51.4
Maintenance of Way Expenses	3,079,235	7,708,903	–60.1
Maintenance of Equipment Expenses	3,672,340	9,854,928	–62.7
Transportation Expenses	9,332,466	16,149,710	–42.2
Total Operating Expenses	19,227,904	37,456,339	–48.7
Net Revenue from Railway Operations	8,011,922	18,568,099	–56.9
Operation Ratio, Per Cent	70.59	66.86	+5.5
Net Railway Operating Income	3,782,424	12,566,092	–69.9
Gross Income	4,280,734	13,641,059	–68.6
Net Income	–632,415	8,526,240	–125.8
Taxes	2,222,009	3,289,868	–32.5
Ratio of Net Income to Taxes Per Cent	–128.5	259.3	

Table I compares selected revenues and expenses totals for 1932 with those of 1929. The resolute manner in which the management has succeeded in keeping expenses down relatively proportionate to revenue will be noted—total operating expenses having been reduced 48.7 per cent to accompany a decline of 51.4 per cent in revenues. The increase in the operating ratio was relatively slight. Taxes, while they declined by almost one-

third, nevertheless greatly exceeded the deficit in net income. The operation of the railroad netted its owners less than nothing during the year, while they were required to see a diminution in their equity in order that taxes might be paid. The public does not appear to appreciate the fact that even in a relatively prosperous year like 1929 the governmental share in net revenue of such a railroad as the M-K-T was about 38 per cent as great as that of its owners, while in 1932 the governmental share took all the income and a portion of the capital. The public interest in railroad prosperity, it would appear, is about as great as if the government owned the carriers outright.

Table II compares selected operating statistics for the boom and depression years. It shows, as do the reports of most railroads, that the emergency freight rate increases granted last year were insufficient to offset reductions made in the three-year period and that, these increases notwithstanding, the trend of freight rates has been downward. It is worth noting that the decline in revenue passenger-miles, 44.3 per cent, was actually less than that in freight ton-miles, although at what sacrifice this volume of business was held is disclosed by the decline in average revenue per passenger-mile of 30.8 per cent. The serious nature of the passenger traffic problem is graphically shown by the average volume per train—only slightly over 22 per train, or less than the capacity load of a single bus.

Table II—Missouri-Kansas-Texas, Selected Operating Statistics, 1932 and 1929 Compared

	1932	1929	+Increase or –Decrease %
Revenue Ton-Miles (thousands)	1,810,323	3,568,164	–49.3
Revenue per Ton-Mile (cents)	1.22	1.25	–2.4
Average Haul (miles)	247	266	–7.1
Revenue Passenger-Miles (thousands)	106,569	191,307	–44.3
Average Rate per Mile (cents)	2.14	3.24	–30.8
Average Distance per Passenger Journey (miles)	190	161	+18.0
Average Passengers per Train	22.12	34.15	–35.2
Average Tons Revenue Freight per Train	455	678	–32.9
Net Ton-Miles per Locomotive Mile	504	592	–14.9
Average Speed of Freight Trains (m.p.h.)	17.0	14.0	+22.0
Percentage Loaded to Total Car-Miles	58.5	58.0	+0.9
Gross Ton-Miles per Train Hour	25,572	28,218	–9.4
Lb. of Fuel per 1000 Gross Ton-Miles	109.6	110.1	–0.4

The decline in average tons of revenue freight per train was almost one-third, reflecting unquestionably a maintenance of scheduled services in the face of light traffic. The reduction of 42 per cent in transportation expenses is the more remarkable in the light of this decline in average train loading. An improvement in fuel efficiency, even though slight, in the face of this decline in average train loading and an increase in average speed of 22 per cent, is also noteworthy. The utilization of car equipment as measured in the ratio of loaded to total car-miles did not suffer.

The company has suffered severely, as have other railroads, from the competitive forms of transport, its annual report mentioning specifically that from trucks and pipe lines. Severe truck competition was experienced not only in the handling of merchandise and carload traffic, but also in coal traffic up to a distance of 100 miles. This competition the road has met as far as possible by rate reductions, more liberal tariff provisions, improved schedules and intense solicitation. Regulation of truck operations by the state authorities, particularly in Texas, has made it possible for the company to compete more effectively with trucks.

The company, with the approval of the Interstate Commerce Commission, charged off $1,662,874 of retired equipment to Profit and Loss, with a similar charge of $436,095 on account of the retirement of its old Missouri river bridge at Boonville, Mo.

Freight Car Loading

WASHINGTON, D. C.

REVENUE freight car loading in the week ended May 6 totaled 523,819 cars, a decrease of 11,857 cars below the total for the preceding week but only 10,132 cars less than the loading in the corresponding week of last year. The Pocahontas, Southern, Northwestern and Southwestern districts reported increases as compared with the corresponding week of last year, while the Eastern, Allegheny, and Central Western districts showed reductions. Increases as compared with the previous week were reported in the loading of l.c.l. merchandise, forest products and ore, and increases as compared with last year were shown as to miscellaneous freight, grain and grain products, ore and coke. The summary, as compiled by the Car Service Division of the American Railway Association, follows:

Revenue Freight Car Loading

Week Ended Saturday, May 6, 1933

Districts	1933	1932	1931
Eastern	119,511	127,208	172,567
Allegheny	96,777	106,673	153,247
Pocahontas	33,480	32,925	42,374
Southern	82,113	80,449	113,662
Northwestern	66,990	61,457	89,273
Central Western	76,460	80,926	111,125
Southwestern	48,488	44,313	63,492
Total Western Districts	191,938	186,696	263,890
Total All Roads	523,819	533,951	745,740
Commodities			
Grain and Grain Products	39,412	28,578	35,253
Live Stock	17,919	18,577	22,503
Coal	76,665	80,394	111,643
Coke	3,481	3,225	6,553
Forest Products	19,167	19,422	32,829
Ore	5,766	2,194	10,793
Mdse. L. C. L.	164,343	185,127	226,227
Miscellaneous	197,066	196,434	299,939
May 6	523,819	533,951	745,740
April 29	535,676	554,197	774,742
April 22	492,270	562,527	758,503
April 15	494,215	566,826	759,494
April 8	487,296	545,623	737,272
Cumulative total, 18 weeks	8,738,243	10,098,914	13,147,861

Car Loading in Canada

Car loadings in Canada continued to increase and for the week ended May 6 reached a high point for the year with 37,409 cars. This was the third consecutive week to show an increase. The index number of 63.59 was also a new high for the year.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
May 6, 1933	37,409	17,930
April 29, 1933	36,049	18,192
April 22, 1933	34,156	17,086
May 7, 1932	41,227	21,017
Cumulative Totals for Canada:		
May 6, 1933	600,919	310,728
May 7, 1932	742,940	388,925
May 2, 1931	855,492	509,854

THE WESTERN AUSTRALIAN GOVERNMENT RAILWAYS, for the year ending June 30, 1932, reported a deficit after interest charges of £190,069 as compared with a deficit of £379,992 for the year ending June 30, 1931. This reduction of almost 50 per cent in the annual deficit the report calls most satisfactory "in view of depressed conditions which have taken a heavy toll on the traffic offered for transportation." Gross revenues were 8.64 per cent less than the previous year, a decline which was more than offset by the drop of 18.67 per cent in operating expenses so that net revenues applicable to interest charges were £211,030 greater in 1931-32 than in the previous year. Interest charges, however, increased during 1931-32 by £21,107 as compared with the previous year and to that extent offset the favorable effect of the increased net earnings on the year's deficit.

Regulation as It Looks Today*

Another cycle in transportation control is at hand—Co-ordination and controlled competition will come

By Harry A. Wheeler

President, Railway Business Association

FEDERAL regulation of transportation has been an evolutionary process from the time such legislation was first placed upon the statute books in 1887, and the evolutionary process is by no means at an end. We may well conclude that the period which began with the regulatory revisions of 1920 is about to be succeeded by another period beginning in 1933, in which the application of the regulatory powers of present existing boards and commissions will be applied to all transportation, particularly inclusive of the new competitive services which have developed. We are sharply confronted with the possible need to reorganize our regulatory functions as applicable not alone to rates and operating practices, but to the formulation of a national plan of transportation development, holding it closer to the actual needs of the country, and to the assurance of sustained credit that will make possible the useful promotion of services in all of the fields of modern transportation.

The importance of reviewing the whole subject at this time is notably increased by the intention of the administration to undertake broad departmental readjustments. If such departmental reorganization is not to include the review of regulation of transportation, it may be years before a like opportunity will be had, with congressional consent and with executive power available, to make changes that are always highly controversial and always opposed by departments and bureaus that do not want to surrender any of their present powers or change the relationships of their personnel.

New Thought on an Old Proposal

It is my purpose to consider certain proposals for the federal regulation of transportation that have been given little constructive thought since they were discussed as a possible part of the Transportation Act of 1920. Let me quote the recommendation of the National Transportation Conference, whose conferences represented a cross-section of all of the interests affected by transportation legislation, and which issued its report in June, 1919:

> The conference favors the creation of a federal transportation board of five members. It shall be the general duty of the board to promote the development of a national system of rail, water and highway transportation, to inquire into and propose measures for preventing abuses therein, to pass upon the public necessity for capital expenditures, and to regulate security issues as provided by Section 5. The federal transportation board shall act as the referee in cases of disagreement of a board entrusted with the adjustment of wages, hours of labor or other conditions of service of railroad employees. It shall also be the duty of the federal transportation board to administer and enforce the means and measures that may be provided for strengthening and stabilizing railroad credit; it shall determine the grouping or consolidation of railroads deemed to be in the public interest, and carry out plans authorized by Congress for merging all railroads engaged in interstate commerce into strong competing systems, severally owned and operated by companies subject as corporations to the jurisdiction of the United States.

I do not know why the transportation board idea was not more favorably received at that time, but a possible answer may be found in the fact that rail transportation was then all important. In 1920, inland waterway transport was of small proportions, intercoastal traffic through the Panama canal, due to war time diversions of shipping, was negligible, aviation in its very beginnings, and highway transport of freight quite unimportant. Doubtless such a condition argued that rail regulation was the real problem, and that the duty should be vested in the commission which had always regulated railroads.

Regulatory Changes Recently Suggested

Since that time, and with increasing frequency of late, other proposals for reorganizing and redistributing the regulatory functions have been brought forward. In 1931, Professor W. Z. Ripley of Harvard university, in answer to proposals for a railroad czar, suggested a secretary of transportation in the President's Cabinet, and a transfer of administrative functions from the commission to the secretary, leaving the judicial functions with the former. Ex-Governor Alfred E. Smith, in his separate statement in the report of the National Transportation Committee, declared, "I favor abolition of the Interstate Commerce Commission and the creation in its place of a new department of transportation headed by one man, or a one-man bureau head in the Department of Commerce, determining policies with the approval of the secretary of commerce." Commissioner Claude R. Porter of the Interstate Commerce Commission has suggested a new bureau of transportation, independent of the executive branches of the government, to be headed by a director of transportation. The Interstate Commerce Commission, the United States Shipping Board and the Aeronautics division of the Department of Commerce, would constitute major sub-divisions of this new "omnipotent" bureau. The secretary of commerce likewise is putting forward his scheme of reorganization. According to press reports, Mr. Roper desires a large transportation section in his department, to which he would transfer, from the Interstate Commerce Commission, the bureaus of safety, accounts, statistics, service, finance and locomotive inspection; from the Shipping Board, the bureaus of research, marine development, construction and finance and the Merchant Fleet Corporation; and from the War department, the Inland Waterways Corporation.

Continuity of Direction Imperative

It is evident that a considerable diversity of views exists concerning the desirable type of reorganization. Professor Ripley's proposal opens up a fruitful field for argument. Other countries have operated with ministries of transport, but in no other country must regulation cover so large an area and embrace the multiplicity of transport services and amount of transport capital at risk, as are encountered within the United States. A cabinet officer is a political appointee and his tenure of office is limited. Nothing could be more disastrous to

* From an address presented before the annual meeting of the Western Railway Club in Chicago on May 15.

the sound development of our transportation supply than to subject it to political expedients and to the lack of continuity of direction imperative to a well-planned system.

Governor Smith in his recommendation indicates more impatience with what he considers the slow processes of the commission, than consideration of the limitations of any individual to comprehend and administer all of the complex and highly technical conditions that surround, not rail transport alone, but all transport. This is no more a one-man job than is the direction of the Federal Reserve System or the Interstate Commerce Commission as now constituted.

While such bureaus as those of safety and locomotive inspection might be transferred to the Commerce department, without handicapping the Interstate Commerce Commission in the performance of its more important tasks, the accounting and statistical activities are so closely related to rate regulation that it is difficult to approve this severance. Sound organization practice requires that each bureau shall have authority over those auxiliary activities which are indispensable for the performance of its major functions. For the same reason, the Bureau of Valuation should remain with the commission.

The disposition to load activities upon the Interstate Commerce Commission, without regard to the compatibility of these functions with each other or the capacity of a single regulating body to perform them all satisfactorily, is probably explained by the fact that the commission was already in existence, whenever Congress decided that more regulation was necessary, and it was easier to assign all these tasks to the commission than to think through the problem of effective reorganization and diversion of regulation. Furthermore, until the last 10 or 15 years, the federal regulation of transportation was conceived largely as that of railroad regulation; the commission was chiefly a railroad regulating agency; therefore, added duties involving railroad regulation seemed to belong there. It is only recently that the task of transportation regulation has been appreciated as one of effecting co-ordination between unlike transportation agencies.

Two Bodies to Regulate Transportation

Perhaps my central thought is that, while programs of reorganization are under review, consideration ought also to be given to the organization of transportation regulation in terms of function, rather than agency. Instead of creating one body to regulate railroads, another to regulate shipping and a third to regulate aviation or highway transportation, we should recognize the difference between the regulation of rates on the one hand and the regulation of transport development on the other. Let the Interstate Commerce Commission retain its former function, with extended jurisdiction over the rates of waterway carriers, highway carriers and aviation companies, when it shall become feasible for the commission to assume those tasks. Create a transportation board to undertake the second function, that of controlling and guiding the development of all interstate transportation facilities. Both regulatory bodies would be independent commissions, anserable only to Congress, and within the scope of their functions they would have jurisdiction over the entire field of transportation.

Such a transportation board should have broad powers of investigation and inquiry concerning all major transport developments; should be charged with the task of leading and influencing developments through conference and advice; should possess legal power to control developments. The legal powers should include grants of certificates of public convenience and necessity to inaugurate or abandon services; the power to approve or disapprove consolidation of railroads or combinations of railroads with other agencies of transportation; and the further power to control developments through the regulation of security issues. The board should be given some participation in national highway and waterway policies, and in general railroad rate level cases, where the interests of the investor are directly involved, the board as well as the Interstate Commerce Commission might well be given some voice in such determinations. The board should be charged with the task of viewing the transportation needs of the country as a whole, and might well become a board of economic planning for transportation.

Reasons for Two Regulatory Bodies

The suggestion of two regulating bodies, differing in function but each dealing with all agencies of transport, largely runs counter to the more prevalent view of the commission as the agency to assume the entire task of regulation. The regulation of freight and passenger rates is a highly technical matter, requiring years of specialized study. Moreover, such regulation is partly judicial and partly legislative in character, the methods rather closely resembling those of a court. The tasks assigned to the board of transportation would differ decidedly in the subject matter with which they would deal, and the methods would more largely involve those of leadership and advice, although legal power would be available in certain cases. The differences in subject matter and mental attitudes required to perform these tasks, in accordance with sound organization principles, would justify their assignment to separate commissions.

I have suggested that the proposed transportation board might be given some voice in determining general levels of transportation rates. This is not in harmony with the transportation emergency bill now before Congress. Quite apart from the corporate instrumentality and the managing group, three large interests exist in transportation, namely, the shipper, the employee and the investor. Rate regulation affords some protection to the shipper; collateral acts of regulation have provided safeguards for the employee. Not until 1920 did Congress definitely say that the commission ought to remember the investor. That was the intent of Section 15a of the Interstate Commerce Act.

Protection for the Investor

The Transportation Emergency bill proposes now to rewrite that section of the Act. Whereas the Transportation Act of 1920 clearly said that the commission should, as far as possible, give the investor a friendly nod now and then, the proposed amendment does not clearly and unmistakably say this at all. So long as the country continues to rely upon the private investor to supply the necessary capital, the investor is entitled to fair consideration along with the shipper and the employee. In spite of the approval given to this provision of the Emergency Act by various groups, in my judgment it does not constitute the best conceivable declaration of policy on the subject.

The emergency bill does recognize the necessity of leadership to promote co-ordination between railroads in order to effect economies, and a co-ordinator and regional commissions are constituted for this purpose. The operation is limited to the period of the emergency only. This policy is sound, but I am inclined to suggest that this policy should be permanent, and that it should be broadened to include all forms of interstate trans-

(Continued on page 733)

Railroad Bill Arouses Little Enthusiasm

Many changes suggested, including giving co-ordinator authority over water and motor carriers

WASHINGTON, D. C.

AN absence of enthusiasm greeted President Roosevelt's emergency railroad bill at the hearings last week and this week before Congressional committees. The most hopeful expressions as to the possibilities of the plan for the appointment of a Federal Co-ordinator of Transportation with extraordinary powers to eliminate so-called competitive wastes, for a limited period were those of the men who had drafted the bill for the President, Secretary Roper, Commissioner Eastman, and Dr. W. M. W. Splawn, and Commissioner Eastman, while visualizing important possibilities, pointed to many difficulties in the way of accomplishing effective results.

Representatives of the railroads expressed a willingness to "go along" with the bill and cooperate most heartily with the federal co-ordinator if it is approved but objected to inclusion of provisions intended to enable the Interstate Commerce Commission to force financial reorganization of companies by withholding approval of loans from the Reconstruction Finance Corporation, or even of further bond issues, unless it is able to find reasonable prospect that a carrier can without such reorganization survive the economic depression and provide for its capital needs thereafter.

The railroad labor organizations represented by Donald R. Richberg have bitterly opposed the bill, although on a theory of its possibilities far transcending those contemplated by its proponents, demanding some amendments which would largely nullify the probability of effecting any important economies in operating expenses under it and others intended to make the co-ordinator a real Czar of the railroads, having authority over financial matters as well as operation. Representatives of shippers and state commissions, while not opposing the idea of the bill, also proposed further amendments which would curtail the power proposed to be given the co-ordinator as well as interpose further delays, while some members of the congressional committees insisted on numerous amendments. The Association of Railway Executives, expressing opposition to Section 14 of the bill, the one designed to promote financial reorganizations, asked that if the subject of government loans to railroads is to be included in the bill provision be made at the same time for liberalizing the requirements as to security for Reconstruction Finance Corporation loans, so that they might be based on the normal earning power of a company and not merely on banking collateral.

Hearings before the Senate Committee on interstate commerce which were begun on May 9 were concluded on May 12 under constant pressure by Chairman Dill to avoid time-wasting arguments on side issues, but those before the House Committee on interstate and foreign commerce, which began on May 8, were continued through this week. Most of the witnesses who testified as to the bill before one committee repeated their statements before the other and were questioned at length by members of both committees, although only a minority of the members of the Senate committee were in attendance.

A new idea was interjected into the discussion before the House committee on May 16 by Charles E. Cotterill, of New York, who, appearing as counsel for 14 water carriers operating via the Hudson River-Great Lakes route and as general counsel for the American Highway Freight Association, urged an amendment under which the federal co-ordinator, as part of his emergency powers, would be given authority to "break the ice into the domain of permanent regulation of other forms of transportation" by collecting the detailed information as to the operations of water and motor carriers which he said would be necessary for even a beginning toward federal regulation. He pointed out that today there is not even a system of registration to show how many such carriers there are and the points between which they operate. He suggested that a fund of about $1,500,000 be raised by an assessment upon motor and water carriers, just as it is proposed to defray the expenses of the co-ordinator's organization by an assessment on the rail carriers, to create a competent force to make such a survey of the situation, possibly by utilizing some of the force to be dismissed from the Interstate Commerce Commission on July 1 because of the reduction in its appropriation.

Mr. Cotterill said that while this is no time to undertake a comprehensive system of regulation of all forms of transportation in an emergency bill, the powers of the co-ordinator, as a part of the emergency program, should at least touch the operations of other carriers, and that he would even be unable to make an adequate study such as is proposed in the bill without some provision for gathering the information needed. He also suggested that the co-ordinator be given power to require the filing of some, if not all, tariff schedules, as a step toward ascertaining the feasibility of requiring a complete system of published tariffs and adherence to tariff rates, and that the railway labor act be made applicable to the operators of trucks. He said that the "deplorable conditions of labor in the trucking industry" and the chaotic conditions of competition among both motor and water carriers is largely at the bottom of the present disorganization of transportation generally.

Nathan L. Amster, before the House committee on Tuesday, urged that the co-ordinator be authorized to make a study of the advantages and disadvantages of a plan for a unified system of transportation, privately operated but owned by a single holding company. Theodore Prince, of New York, also urged consideration of a plan for the creation of a federal railroad corporation, in which each railroad would have stock, to create a unified system of transportation operated under the supervision of a Secretary of Transportation. He criticized the bill before the committee on the ground that it proposes "tearing off a piece of the Interstate Commerce Commission and putting the railroads between the pieces." He said it would leave the financial situation of the railroads to the same body that has been largely responsible for their present condition and gives the commission greater power over the railroads than it ever had. He proposed giving more power to the railroad co-ordinating committees.

C. R. Gray, president of the Union Pacific system and chairman of the contact committee that has been

representing the railways in conferences while the bill has been under consideration, began his statement on May 11 by saying he was not one of those who share the belief that the railroads are a vanishing institution. Any organization that by and large can handle its business for the charge the railroads make cannot be supplanted by any other form of transportation.

There has been a great deal of criticism, Mr. Gray said, about the so-called "competitive wastes" in railroading, which was voiced in the President's Salt Lake City speech last Fall, many times in Interstate Commerce Commission decisions and reports, and emphasized in the recent report of the so-called Coolidge committee. Many of the suggestions have gone so far as to propose consolidation as a cure, but consolidation is a long-drawn out process and cannot take place under any pre-conceived plan but must be brought about in a natural way.

Reduction of Competitive Duplication Proposed

This bill is intended to take advantage directly and immediately of as many opportunities for saving by eliminating competitive duplication as possible. Railroad officers have been trained in the preservation of competition, which inevitably means some duplication and excess of facilities and the thought underlying the bill is that the railroad men know the situation best and that the co-ordinating committees will go as far as they can by common consent toward accomplishing some of these things that have been suggested, while the co-ordinator would have power to decide what is in the public interest with all the facts before him. Whether done in one way or another, Mr. Gray said, elimination of duplication has the same general effect, the displacement of labor.

Senator Couzens asked if the elimination of competition would not also eliminate ambition. Mr. Gray replied that he had no idea that the process would go so far as the Senator apparently had in mind. He said the committees could explore every situation and put up to the co-ordinator a record giving all the information, and the whole effect of a proposal, as to who objects and why and how many men would be displaced and why. The co-ordinator would then be required to consult the employees' representatives before issuing any order. It is very difficult for railroad officers and employees to grasp the public interest in any proposal, Mr. Gray said, but that could be decided by the co-ordinator having all the facts before him.

A common mistake of those who have discussed the bill, Mr. Gray continued, is their belief that the railroad committees would have any powers. They would not have under the bill a particle of power more than the railroads have today, without the assistance of the co-ordinator, but he would have the power to explore any possibility and agree or disagree with the committees and issue an order.

When Senator Couzens asked if controversies would not be prevented if labor had representation on the co-ordinating committees as suggested by Mr. Richberg, Mr. Gray said they would not. Labor would be inevitably opposed, not improperly, to any change in service that would affect them directly and the controversy would have to go to Washington for decision anyway so that only delay would be created by giving labor a voice in the matter in the first instance.

A Short Cut to Economies

Mr. Gray said he saw no objection to the amendment proposed by the short lines to give them representation as to matters in which they are concerned, saying they would not be involved once out of 25 times.

The co-ordinator plan, he continued, is conceived as a short cut to many of the economies that might be possible under consolidations, but he thought the matter of greatest value in the bill is the requirement that the co-ordinator study the situation and make recommendations as to what will aid the development of transportation. Also the experience under the plan of the bill will stop some of the wild statements being made as to possible savings to be accomplished by various plans, and the co-ordinator will find out, as the railroad officers have found out, that many things unthought of will prevent the accomplishment. Commissioner Eastman had suggested in his statement several things that have possibilities, Mr. Gray said, but when Senator Couzens asked if he believed $100,000,000 could be saved, he said he did not know. Asked by Senator Couzens if the railroads had helped draft the bill, Mr. Gray said they had not. He thought that Secretary Roper had very fairly stated their relation to it. The railroads had injected themselves into the discussion at one stage but their plan was disregarded because it left too much to the railroads and after that they kept in contact with the subject.

The co-ordinator, Mr. Gray said, will explore many theories and find many possibilities but he is going to hesitate many times because of the human effect. Mr. Gray admitted that the railroads had enlarged their facilities beyond present needs but said it was done under the highest conception of the public needs, having in mind the losses resulting from transportation shortages in former times. They are faced with an overbuilt plant today but he "would have thanked God for any part of it during the war," when he was director of the Division of Operation of the Railroad Administration. The co-ordinator may find that some of it can be temporarily dispensed with and there is some excess mileage but efforts to get rid of it run into every kind of difficulties.

Railroad Can Produce Cheapest Transportation

The railroad plant as it stands can produce the cheapest transportation, Mr. Gray said, and if business comes back the railroads can no more be denied their share of it than the seasons can be prevented. If the railroads are given some elasticity, the necessity for which the co-ordinator will learn, they can meet the motor competition, although they may have to surrender the short-haul zone. Mr. Gray took up in detail the various amendments suggested by Mr. Richberg, saying that many of them were based on a false premise as to the purpose and provisions of the bill and the assumption that the regional co-ordinating committees were to have powers not possessed by railroad managements now. There is no use including other carriers controlled by railroads, he said, because they can be reached directly by the co-ordinator through the railroads. The co-ordinator should not be given power to "bring about" financial reorganizations, he said, because he did not see how he could do so within his limited tenure of office, and he conceived of the bill as an operating bill that would keep the co-ordinator busy with operating problems. Whereas Mr. Richberg had proposed to deny the "benefits" of the bill to carriers that failed to comply with numerous suggested conditions, Mr. Gray pointed out that it would be rather impracticable to omit a carrier that is part of a through route and that to leave out particular lines would simply tie the co-ordinator's hands. Mr. Richberg's amendments, he said, propose a complete revision of the whole relationship between management and labor and have no place in such a bill.

Senator Couzens asked if Congress should enact "legislation to deflate labor without any attempt to deflate capital." Mr. Gray replied that "capital has been pretty

well deflated already." As to the proposal that the co-ordinator be empowered to require expenditures for rehabilitation and improvements, Mr. Gray said that he believed the railroads would keep their properties up in proportion to their business but that it would be rather impracticable to require improvement of an overbuilt business by law.

Comparatively Few Employees Likely To Be Displaced

Pressed for an estimate as to how many employees would be dropped as a result of the economies proposed in the bill, Mr. Gray said it would be surprising if 10,000 men were displaced this year as a result of orders of the co-ordinator.

Discussing loans from the R. F. C. Mr. Gray said that money loaned to the railroads is not given to them and it will be repaid, and he pointed out that many railroads have not borrowed a cent from the government.

R. V. Fletcher, general counsel of the Association of Railway Executives, told the committee that many of Mr. Richberg's suggested amendments represent "social theories" and a "code for the reorganization of society in the special field of the relations of employer and employee" that have no place in temporary emergency legislation dealing with operating questions. The railroads have been engaged for 12 months in formulating a program of policies they would like to recommend to Congress to improve the whole transportation situation, and if the committee wanted to consider permanent legislation they would be glad to give their views.

Judge Fletcher also suggested that the orders of the co-ordinator ought not be kept in effect after the law ceases to be effective, because he would be given rather extraordinary powers to set aside permanent laws during the emergency, which, if they are to be changed, should be considered as part of a permanent railroad policy.

Section 14 Criticized

One of the great difficulties about Section 14 of the bill, he said, is that it requires of the Interstate Commerce Commission an impossible thing, to decide how long the depression will last before deciding whether a railroad could survive the depression or ought to be reorganized before approving a loan or a bond issue. Such a provision, he said, has no business in a bill attempting to deal primarily with operating questions and he asked if it would not be better to omit any reference to bond issues because there is an elaborate law relating to security issues now. If it is desired to leave in the provision directing the commission to withhold approval of loans he suggested that the language be changed to require the commission merely to find "reasonable prospect" that a carrier can "under normal conditions" provide for its financial needs without reorganizations.

The theory of R. F. C. loans, he said, is to tide the carriers over the period of the depression and allow them to live until normal conditions are established and the language of the bill would probably lead the commission to refuse loans that ought to be made.

Judge Fletcher also asked the Committee to give earnest consideration to an amendment to the R. F. C. act to allow loans on the security of the past, present and future earning power of a railroad, instead of requiring bankable collateral, according to the Interstate Commerce Commission's interpretation of the present requirement of "adequate security." Senator Couzens said the commission's interpretation represents the intent of Congress.

Judge Fletcher said the railroads endorse the amendments suggested by Commissioner Eastman providing for a specific method by which orders of the co-ordinator should be reviewed by the courts and that 20 days should elapse before an order became effective.

When Senator Couzens asked if he agreed with the policy of the bill recently passed by the Senate to prohibit loans to companies that do not reduce salaries to $17,500 a year, Judge Fletcher said he certainly did not; that he did not believe the security of the investor would be improved by taking the railroads away from men paid over that amount and turning them over to men paid less.

Alfred P. Thom, associate counsel of the Association of Railway Executives, amplified the proposal for a liberalization of the security requirement for loans, if the subject of loans is to be included in the bill. He said that there is one class of railroads that must undertake to reconstruct their financial structures at once and another that probably will never be called upon to do so, but that there is also a class of roads of great merit and great possibilities that will have a substantial chance of being able to postpone such a step until it can be carried out under fairer conditions than those of the bottom of a depression or to escape reorganization altogether. It would be unfair to the security holders of the third class of roads to make them reorganize under conditions that may not be enduring and which would cause them great hardship, and loans ought to be permitted to roads of the first class that can give adequate security, to those of the second class, and to those of the third class where the commission finds that the financial structure is such that there is reasonable prospect that the carrier can provide for its needs under a restoration of normal conditions. He proposed, however, a provision by which loans made under such circumstances would have priority of liens over other indebtedness in the event of a reorganization.

Referring to the arguments made against the bill because of the possible displacement of labor, Mr. Thom said he did not see how there could be an employee without an employer and that the way to promote employment is to build up the employers. If some temporary unemployment is caused in the process, he said, that is a problem for the government to deal with.

State Commissions Want Recognition

John E. Benton, general solicitor of the National Association of Railway and Utilities Commissioners, said he had no desire to oppose such legislation as Congress may find necessary to carry out the purposes of the bill, but he objected because it in no way recognizes even the existence of the states and the state commissions, although questions of service are peculiarly local in their nature. He pointed out that the co-ordinator is required to notify labor before issuing an order but said that the public would receive no notice and that the state commissions would have no opportunity to present facts to the co-ordinator, who would make up his mind on representations made by the railroads. He asked that provision be made so that the states would be given the same consideration as the bill accords to the labor organizations, both as to notice and right of appeal, and that it be made clear that orders of the co-ordinator should not continue to operate after the expiration of the law in such a way as to prevent the functioning of the state commissions.

Shippers Express Opposition To Giving Government Official Dictatorial Powers

The National Industrial Traffic League and other shipper organizations through their spokesman, R. C. Fulbright of Houston, Texas, went on record on May 12 as favoring the general features of the President's emergency railroad program and pledged the co-operation of

the shippers organizations to help bring about more efficient and economical transportation service. Full endorsement was made of the legislation requested by the President to regulate holding companies, revise the rate-making rule and repeal the provisions for recapture of railroad earnings. The principal features of the bill to create a federal co-ordinator for the railroads were endorsed with a few suggestions.

The only important feature of the railroad bill to which the shippers objected was the provision that would give to the federal co-ordinator the right to issue and enforce orders to require the railroads to do certain things which the railroads did not consider to be for their best interests. They favored giving to the co-ordinator the power to authorize or to require action by the railroads which has been recommended by a majority of one of the regional committees to be created under the act and to enforce such orders even though some of the railroads involved should be opposed to them. It was contended that to give to the co-ordinator any further power would create a government dictator for the railroads and that this would not be in harmony with the general purpose of the bill as stated by Secretary Roper who stated that the primary purpose of the bill was to assist the railroads to help themselves.

"We do not believe we have yet reached the point," said Mr. Fulbright, "where it can be assumed that the constituted managers of the railroads cannot be depended upon to undertake to determine what is in their own best interests. We believe that the railroad managements know enough about the operation of their respective railroads, and the requirements of the shippers, to be able to determine whether or not any real economies may be realized under any action proposed to be taken by such railroads. On the other hand, we do not believe that there is any one person endowed with sufficient technical knowledge of the conditions under which the various railroads operate and with sufficient wisdom to place his judgment entirely above that of the combined railroad managements, or a majority of them."

Objects to Labor's Attitude

Mr. Fulbright took sharp issue with the attitude assumed by the railroad labor organizations in opposition to the bill and expressed the view that if any substantial economies are realized it will enable the railroads to increase their traffic and improve their service thus redounding to the benefit of the employees as well as the public.

"Labor is standing in its own light," said Mr. Fulbright, "when it undertakes to impede this character of progress. It has taken a short-sighted view when it considers the elimination of employees engaged in a service that is unnecessary and wasteful at this time rather than to consider that by the elimination of such services the railroads can help bring back the normal flow of traffic and give employment to a greater number in the long run. That this will occur is the conviction of many students of transportation and it is at least worthwhile to give it a trial as a part of the general program we are undertaking for rehabilitation of industry."

The League requested that the bill be broadened so as to include consideration of the abandonment of railroad branch lines and other facilities where under changed conditions it is manifest that a continuance of the operation of such facilities for the future is not economically justified. The opinion was expressed that in this field lay the greatest opportunity for major economies in the cost of railroad transportation. The League advocates the abandonment of all railroad lines where there is no prospect that such lines will again become profitable and where the public can be served by as efficient and dependable transportation through other agencies. Concerning the efforts of the railroads to abandon unprofitable rail lines, Mr. Fulbright said, "The difficulty is that the railroads have had to fight public opinion in these matters. Local interests invariably appeal to political leaders and to public officials to resist the abandonment of any line no matter how unprofitable its operations may be nor how little prospect there is for its future business."

Short Line Representation

E. J. Jones presented a statement on behalf of the American Short Line Railroad Association, having a membership of approximately 318 roads, stating that under the terms of the bill they could not hope to have representation on the regional co-ordinating committees selected by voting on a mileage basis. He urged an amendment to authorize the federal co-ordinator to appoint upon any regional committee, in addition to the five regular members, a representative nominated by the organization to participate in the consideration and disposition of only such matters as affect the interests of the short lines.

H. W. Purvis, receiver and general manager of the Georgia & Florida, advocated a somewhat similar amendment and others, including an authorization to establish new through routes which might include short lines regardless of the right of the originating carrier not to be short-hauled but with a provision that no routes now existing shall be eliminated except with the consent of all participating lines or upon order of the co-ordinator.

C. D. Cass, representing the American Transit Association, also asked that provision be made for representation of electric railways upon the regional committees when matters affecting them are to be considered.

W. W. Royster, chairman of the Railroad Employees' National Pension Association, told the committee that the bill does not afford labor any means of protecting itself and recommended that provision be made to pension the older employees, if forces are reduced as a result of the operation of the law, so that the younger employees might be retained. He said a broad application of the principle of the Hatfield pension bill urged by his organization would solve the problem.

J. G. Luhrsen, president of the American Train Dispatchers' Association, asked that provision be included in the bill for a work day of six hours and 15 minutes for train dispatchers without reduction in pay below the present rate for eight hours.

J. R. Van Arnum, transportation secretary of the National League of Commission Merchants, also suggested some amendments to the bill, and Benjamin C. Marsh, executive secretary of the People's Lobby, told the committee that the bill is "no part of a new deal, but a new steal."

In reply to one or two questions as to whether the government ought not take over the railroads or be thinking of doing so, Mr. Eastman said that "that is a thing the co-ordinator ought to study." He said he had expressed himself on several occasions on the principle that the government could probably operate the railroads under a proper system more efficiently than they have been operated but that as to the question of taking them at the present time he saw many difficulties in the way because of the uncertainty of the future of the railroads, the question of what price the government ought to pay and the question of whether it would also have to take over other transportation systems. "I have not thought it out to the extent that I have a plan under which the

government should take over the railroads," he said. He had put certain thoughts on paper but had never got a plan that satisfied him. One of the difficulties is that if the government should take the railroads under the power of eminent domain it would have to pay what the courts said, although it might be able to make a trade today.

Dr. Splawn, in his statement to the committees, referring to the section that requires the co-ordinator to confer freely with the regional committees and to let them have the benefit of his advice and assistance, said that "by assistance is meant tact, persuasion, threats of the use of public opinion, and perhaps information gathered through the commission and more complete than might be available to a committee." In the last part of Section 6, he said, "there is language which is rather strong. It provides that if a committee fails to act with respect to any matter which the co-ordinator has brought to its attention, he may issue and enforce an order with respect to such matter. This appears to put a big stick in the hands of the co-ordinator. In view of the liberal provisions set forth in Section 9, and of the short life of the office of co-ordinator, and of the fact that he issues his orders without notice and hearing, it is doubtful if, in practice, this provision would enable the co-ordinator to accomplish much on his own initiative and apart from the initiative and the voluntary action of the co-ordinating committees." On the other hand Commissioner Eastman, in reply to questions by members of the House committee, indicated that he held the view that the co-ordinator was not to be just a rubber stamp, by any means.

Mr. Richberg, appearing before the House committee on Wednesday, urged approval of Mr. Cotterill's suggestions, saying he believed it was the first time that employers representing a substantial part of a great industry had come before Congress requesting that their industry should be regulated and that they should be assessed to pay the cost and that their employees should be encouraged to organize. Referring to Mr. Gray's statement that it would be surprising if 10,000 men were displaced as a result of orders of the co-ordinator he said that if that is all the bill proposes it would hardly be worth while, but that his own estimates that 50,000 to 300,000 would be displaced had been based on estimates that the bill would make possible savings of $100,000,000 a year.

Mr. Fulbright was to be heard by the House committee on Thursday and Mr. Gray on Friday.

The Senate committee considered the bill in executive session on Tuesday and Wednesday in the hope of reporting the bill before the end of the week. Commissioner Eastman attended the meeting on Wednesday.

Regulation as It Looks Today

(Continued from page 728)

portation and not rail transport only. This would be the task of a transportation board.

Other Changes Needed

I have purposely refrained from commenting, other than casually, upon those phases of transportation regulation under general and continuous discussion by many groups. Fourth Section relief, it seems to me, must be accorded. Possibly a control of the supply of ships to be permitted to operate in intercoastal service and a change in the rate control, which must be something more than a regulation of the maximum rate, will put new life into transcontinental rail operation. But if this cannot be had, then Congress must, in justice to the rail carrier in the transcontinental group, amend the present Fourth Section by repealing the "reasonably compensatory" clause, and return substantially to the language of the Act as it stood in 1910.

In that field of high controversy, the extension of rate regulation to all transport services and under one rate-making power, I want to add a word of explanation to a previous statement: "The Interstate Commerce Commission should have jurisdiction over the rates of the waterway carriers, highway carriers and aviation companies when it shall become feasible for the commission to assume those tasks." There are real difficulties to be faced in attempting rate regulation of the highway carrier, common and contract. The Interstate Commerce Commission should be empowered to accumulate the necessary data to enable them in the near future to assume responsibility for regulating both rates and practices of all interstate carriers by motor truck, whether common or contract, upon the same basis that they will regulate railroads and waterway carriers, and for this purpose they should require the filing of tariffs and systems of charges and be empowered to prescribe uniform accounting systems and to require reports. On the basis of these data and such other studies as the Interstate Commerce Commission may make, regulation of rates and practices should be undertaken at the earliest possible date in order that a practical method of regulation may be formulated.

As to Valuation

Upon only one point more shall I touch, namely, valuations and their use, for it is upon this point that I have offered some criticism of the text of the Emergency bill. The purpose of entering upon the ascertainment of value, as now provided in the Interstate Commerce Act, was clear. For the public, it was to gain the assurance that actual values were behind the railroads' capital structure, and for the railroads that the accusation of trying to collect upon watered securities could not justly be laid at their door. The work of the valuation section of the commission is far enough advanced to prove reproduction values, which provide a surplus over and above the railroad capital structure, but the method of keeping up the valuations under the present law is agreed by all interests to be cumbersome and useless, and the possibility of making rates that will provide a fair return upon such ascertained value is so remote that no one, even including the carriers themselves, expects the effort to be made. There is, however, a saving consideration absent in the Rayburn section of the Emergency bill, and in the more complete transportation legislation that will come before the next session of Congress, an effort should be made to agree upon appropriate language for tying values and rates together in some more definite way than in the rather meaningless phrase, "so far as possible."

I am convinced that another cycle of transportation regulation is upon us; it is not improbable that 1933-1934 may begin a new chapter in such regulation. Transportation conditions have changed radically in the last two decades, and regulatory policy must change with them. The tasks seem difficult in the extreme, but so they appeared to past generations. Controlled competition seems to be the catchword of this period. Doubtless something of economic planning will figure more prominently in the future, and it might well make its debut in transportation. A co-ordinated system of transportation requires a co-ordinated scheme of regulation.

How About the Crosstie Problem?

Producers and railway men consider problems of supply and of quality at Richmond convention

APPROXIMATELY one hundred producers of railway crossties and railway maintenance and purchasing officers interested in their use gathered at Richmond, Va., on May 10-11 for the convention of the Railway Tie Association, formerly the National Association of Railroad Tie Producers. The program was featured by addresses by Dr. Julius H. Parmelee, director of the Bureau of Railway Economics, Washington, D. C., on Future Crosstie Requirements; by D. C. Curtis, chief purchasing officer, Chicago, Milwaukee, St. Paul & Pacific, Chicago, on What the Buyer of Ties Expects from the Seller; and by R. S. Belcher, manager treating plants, Atchison, Topeka & Santa Fe, Topeka, Kan., and president of the American Wood Preservers Association, on The Tie of the Future. John J. Cornwall, general counsel of the Baltimore & Ohio, spoke at the annual dinner on Wednesday evening on The Railroad Situation. In addition to these addresses, a number of papers and reports were presented by members of the association. Abstracts of the addresses of Dr. Parmelee and Mr. Curtis will appear in following issues; others are reviewed below. All sessions of the meeting were presided over by S. S. Watkins, vice-president of the Joyce-Watkins Company, Chicago, president of the association, assisted by Roy M. Edmonds, secretary, St. Louis, Mo.

Among the activities initiated during the year by the association is the compilation of statistics showing the number of ties uninvoiced in the yards of producers whose combined inventories of this character are estimated to exceed 75 per cent of the total for the country. These figures, which are now being compiled and distributed monthly under the direction of a committee headed by E. J. Stocking, manager of sales, Hobbs-Western Company, St. Louis, are designed to inform producers and buyers alike as to the status of stocks available for use.

At the concluding session, the following officers were elected for the ensuing year: President, B. N. Johnson, B. Johnson & Son, Richmond, Ind.; first vice-president, S. D. Hicks, vice-president, Southern Wood Preserving Co., Pittsburgh, Pa.; second vice-president, E. J. Stocking, sales manager, Hobbs-Western Co., St. Louis, Mo.; secretary-treasurer (re-elected) Roy M. Edmonds, St. Louis, Mo.; members of executive committee, D. B. Frampton (three years) chairman of the board of directors, Tennessee Tie Co., Pittsburgh, Pa.; H. R. Condon (two years) vice-president and general manager, Century Wood Preserving Co., Philadelphia, Pa.; R. Van Metre (one year), president, Wyoming Tie & Lumber Company, Chicago.

Abstracts of various papers and reports follow:

Determining Future Requirements

Since the crosstie producer suffers more severely from the wide fluctuations in demand than from any other one condition, it was not unexpected that the extent to which future requirements might be anticipated would receive consideration. This was the topic discussed by J. J. Schlafly, president of the Potosi Tie & Lumber Company, St. Louis, Mo., in part, as follows:

Whether considered from the standpoint of the railroads or of the producers, extreme fluctuations in demand are highly unprofitable. Coming into the market after a long period of curtailment, with their own stocks of ties at low ebb, the railroads quite naturally find producers' stocks also badly depleted. Then comes the realization that the producers cannot make deliveries within the time required by the new tie programs, since most of the ties needed have to be produced after contracts were placed. Advice that it may take two or three months to get the tie hackers back to volume production is the buyers' next shock, and he faces the impossible task of securing a product quickly which, unlike factory-made items, cannot be put into heavy production over

night. Then there are other delays such as those caused by bad weather, overflows in the woods, tie-makers stopping to put in their crops, etc., and finally there is the long seasoning period at the plant before the ties were ready for treatment. These experiences increase the cost of ties to the railroads, often with a sacrifice in quality and seasoning time, and finally failure to secure their requirements when needed.

But the producers' troubles do not end here. Few producers can foresee an impending slump and anticipate it by reducing overhead, production volume and field prices in time. Rather, most of them carry over a lot of high-priced ties which steadily depreciate in quality all the time they are struggling to move them, with the market settling lower and lower each month.

When railroad managements are confronted with the necessity of reducing expenses, they have always been prone to take advantage of the normal factor of safety in track construction which permits curtailment of tie renewals for a considerable period without creating a serious hazard. As long as there is this recurring necessity, there is little chance that the railroads, each with its individual problems, can reasonably be expected to make approximately uniform tie purchases from year to year, in spite of the certain benefits that would accrue to them notwithstanding.

Is Standard Boring for Ties Practicable?

With the recent development of the practice of adzing and boring ties for spikes prior to treatment, a new problem has been created for those companies which produce and treat ties prior to the receipt of specific orders, by reason of the lack of standards, as between roads, for this boring. This problem is of scarcely less concern also to those railways which normally or occasionally buy ties already treated for immediate delivery. Recognizing this problem, the association appointed a committee consisting of W. J. Burton, assistant to chief engineer, Missouri Pacific; W. H. Penfield, engineer maintenance of way, Chicago, Milwaukee, St. Paul & Pacific; and Ed Kelly, sales engineer, Greenlee Brothers, to study and report on this subject.

This committee called attention to the benefit of regular and fairly uniform production of crossties. The adoption of standard specifications for ties and for their preservative treatment went a long way towards enabling the producer to get out ties between the seasons of active purchasing because he knew that if his ties met the specifications he could find a buyer and that if treatment became necessary before the ties were sold, he could give a standard treatment and still be reasonably sure of a sale. But the new and growing practice of pre-adzing and pre-boring ties has taken away part of this benefit and made it much less possible to treat ties prior to specific orders, on account of the great variation in the required spacing and arrangement of the spike holes. No two railroads specify the same pattern, even for identical rail sections, cant of tie plates, etc., with the result that if a producer makes ties without orders and it becomes necessary to treat such ties, they must be either treated without boring, or bored to some template which will very likely be unsatisfactory to later prospective buyers.

In the long run, all producer costs must be borne by the purchaser. A corollary is also true, i.e., in the long run what benefits the producer will benefit the purchaser. Removal or lessening of the peak demands for ties will tend to ease these wasteful buying periods which have always come when business "opens up." Also, the opportunity for the producer to treat ties as soon as they are sufficiently seasoned should remove the tendency to hold unsold ties too long before giving them preservative treatment, with the resulting (even though frequently unobservable) deterioration and lessened service life.

Replies to questionnaires sent to railroads whose ties are adzed and bored prior to treatment show an almost complete lack of agreement in the specified dimensions, even for the same rail sections, tie plate, cant, etc., although many stated their belief that a standard is desirable. With respect to the length of the tie, the positions of the holes depend upon the gage (usually standard), width of rail base, width of rail head at gage line, height of rail, if canted, cant of tie plates if any, diameter of spike, shape of spike at throat and clearance allowed for, if any. With respect to the width of the tie, the positions depend upon the design of the rail joint and the necessity of keeping spikes away from the nut end of track bolts. The size of the hole depends upon the size of the spike and the kind of wood, but variations in the size of hole are relatively unimportant.

The committee concluded its report with the recommendation that the Railway Tie Association call the attention of the American Railway Engineering Association to the mutual benefits which would result from the adoption of a standard or standards for adzing and boring ties and suggest to that association that it give consideration to an effort to so standardize the track and its parts for at least the more important rail sections as to result in standardized adzing and boring; also, that features which may be fixed without difficulty at present, such as the length and position of the adzed surface, the size of the spike hole, and possibly the spacing between holes parallel to the rail be standardized.

The Crosstie of the Future

Appearing as the president of the American Wood-Preservers' Association, R. S. Belcher emphasized that to a great degree the tie producer and the wood preserver face the same problems. The treatment of crossties has been the backbone of the wood preservation industry since the first crossties were Kyanized for the old Northern Central Railroad 100 years ago. Both industries serve the railways—are indispensable to the railways.

We have been told many times that we are working ourselves out of a job by reason of the very excellence of the material and treatment in the cross and switch ties of today; that this class of material will last so long that the requirements of the railways will be steadily reduced. To a certain extent, this appears to have happened. The fact that the percentage of treated ties in the tracks of the railways of this country has been sufficient to enable them to reduce maintenance expenditures to an extent that would have been altogether impossible if most of the ties in track had been untreated, as was the case 25 years ago, has been a godsend to the railways in their struggle to reduce operating costs during the last three years.

Tie purchases of the past year or two indicate that the "bottom has been reached," and that they will increase during the next few years. In round figures there are 1,250,000,000 ties in the tracks of the railways of the United States. If all of these ties—treated and untreated

—had an average life of 27 years, the annual requirements for replacements would be about 46,000,000, the total of the 1931 purchases. Since our experience indicates that 27 years is much too long an average life for all ties, treated and untreated, in all tracks, it follows that the 1931 tie purchases are much lower than can continue for more than a year or two. In like manner, the 86,000,000 ties purchased in 1929 indicate a 14½ year average life of all ties in all tracks, which is more in accordance with what our experience has taught us to expect from a mixture of treated and untreated ties of all kinds and under a great variety of conditions. If by the replacement of untreated ties with treated ties, the average life is brought up to 20 years, requirements will fall to 63,000,000, but it will be some years before a 20-year average life will be reached.

In these figures only replacements have been considered. Naturally increases or decreases in track mileage affect the situation, as do other conditions, such as the stocks of ties held in storage by the railways. All in all, it seems that the "bottom" of tie purchases reached during these last two or three years of depression will be the "record low" for a number of years to come.

Tie producer and tie preserver are familiar with the very considerable loss due to checking and splitting of certain species of wood during the seasoning period. The fact that a very considerable percentage of crossties fail primarily because of splitting, checking and shattering, after they have been placed in track is not so well known. On some roads this is more of a problem than on others. On the road with which I am connected, splitting, checking and shattering ranks next to "spike-killing" as the primary cause of failure of crossties.

Mention of the term "spike-killing" brings to mind the desirability of studying various means of fastening the rail to the crosstie, including the design of tie plates, all in the interest of an improved treated crosstie—a complete crosstie. In this connection, I recall Elmer T. Howson's prediction in his address at your 1932 convention that the tie producer and the tie preserver are, in the future, going to sell a completed treated tie, machined, adzed and bored, ready to place under the rails. I firmly believe that such will be the practice sooner or later. The preframing of bridge timbers at the treating plants has been found not only conducive to longer service life in structures, but also more economical in first cost than framing in the field. Undoubtedly the time will come when the railways will find the complete crosstie, on which the rail may be laid with a minimum of expense, the most efficient and economical.

Freight Rates

The Committee on Transportation, of which John Wright, Ayer & Lord Tie Co., was chairman, reported on truck competition. This competition, the committee said, is a matter of great concern to the tie producers as well as to the railroads. To meet this competition, some of the roads have, during the last year, reduced the rates on crossties for short hauls approximately a third. In one locality it was reported that the following rates for ties have recently been established for short hauls for minimum carloads of 36,000 lb.

For 10 miles—2½	cents per 100 lb.
For 20 miles—3	cents per 100 lb.
For 30 miles—3½	cents per 100 lb.
For 40 miles—4	cents per 100 lb.
For 55 miles—4½	cents per 100 lb.
For 70 miles—5	cents per 100 lb.
For 85 miles—5½	cents per 100 lb.
For 100 miles—6	cents per 100 lb.

These rates will probably eliminate most of the truck competition in that territory.

As an illustration of the increase that has occurred in freight rates since 1909, attention was called to the fact that prior to 1903 the freight rate from Ohio river points to Chicago was 10 cents per tie, whereas the present rate is 17 cents per 100 lb., or approximately 28 cents per tie, an increase of 180 per cent.

The committee called attention to the fact that ties and high grade lumber move now on the same rate, whereas crossties can be shipped in rough freight cars with no transit damage risk, while high grade kiln-dried lumber requires tight box cars and suggested that an effort be made to have ties move on not more than 75 per cent of the lumber rate. It also suggested that the railroads be asked to reduce the minimum carload requirement which, it said, would not tend to cause the tie companies to ship lighter loads, as shippers would still have the per-car switching charges and placings to consider, but would probably result in the railroads securing business now being given to trucks.

In replying to the recommendations of the committee, J. P. Kelley, assistant to vice-president, Chesapeake & Ohio, called attention to the inadequacy of the present freight rate structure, as evidenced by the lack of earnings of the roads, to the inter-relationship of rates on different commodities and between different localities, and to the fact that the railways themselves ultimately pay the cost of freight on crossties, all in rebuttal of the committee's recommendations.

Adherence to Specifications

Does Adherence to Specifications Pay the Producer? This was the question which O. L. Massey, Ayer & Lord Tie Company, Memphis, Tenn., answered in the affirmative. At first thought it is difficult to believe, said Mr. Massey, that close adherence to the standard specifications will prove beneficial to the tie producer; yet, we have found that merchandise well made is half sold. We are instructed by the purchaser as to the kind of timber that is to be manufactured into crossties, in many cases as to the season of the year in which the ties are to be manufactured, and as to the sizes and lengths. Over the past quarter of a century, specifications have been written more closely and they have been applied more strictly.

On first consideration, it would seem that the restriction of the period of production to the winter months would be expensive for the producer for the reason that during this season we have short days, inclement weather, soft roads and other conditions which tend to retard production; yet, we find that the timber seasons more evenly and that we do not have the loss of labor and timber through excessive season-checking, that occurs during the more favorable working months. Moreover, we find that ties cut during this winter period will carry longer on the plant yard without deterioration. However, if a tie producer is to be restricted to this short period, the buyer should anticipate his requirements by several months in order that the producer may make the necessary preparation for producing or procuring the desired within such a limited period.

Again, in regard to size, if the inspector is tolerant, to even a small degree, and permits ties of under size to get into the higher grades, the producer will become careless in the manufacture of his timber and will in many instances take a chance, whereas if he understands that close adherence to specifications regarding size is re-

quired, he will cut only such trees as will work without waste.

It is often found there is no uniformity in the application of the same specifications by different inspectors. We often find it difficult to meet the requirements of our customers because of the varied opinions of the inspectors, and feel that each inspector should have the proper conception of the specifications and apply them consistently.

Following the presentation of this paper, E. E. Pershall, president of the T. J. Moss Tie Company, St. Louis, Mo., reviewed the improvement that has occurred in the character of crossties produced, following the drafting by the United States Railroad Administration of a uniform specification. Mr. Pershall supplemented his talk with photographs showing the condition of tie yards in 1918 and at intervals since that date, demonstrating the betterment that has taken place in both manufacture and seasoning conditions.

Utilizing Various Tie Sizes

A committee, of which A. R. Fathman, vice-president Hobbs Western Company, was chairman, reported on the economy of utilizing tie sizes in proportions normal to woods-run production. In its report, the committee started from the premise that wood utilization is timber conservation to the same degree that the prevention of forest fires or tree diseases conserves our natural resources. After a tree is felled, it is the duty of the tie producer to manufacture and utilize all the useful products that his intelligence and skill make possible. Applying these principles to the utilization of tie timber, he should, so far as possible, find use for such various sizes of ties as may be most readily and naturally made from the tree and as can be economically applied to the various conditions of track service.

A study of the production of the various sizes of ties in any calendar year is a valuable guide. The figures given herewith apply to approximately five million ties produced and sold during 1928, by several of the larger tie companies.

Production	Tie Size	Sales
28.2 per cent	No. 5	28.5 per cent
9.2 per cent	No. 4	8.5 per cent
39.7 per cent	No. 3	43.2 per cent
12.8 per cent	No. 2	10.0 per cent
10.1 per cent	No. 1	9.8 per cent
100 per cent		100 per cent

Considering in separate groups, ties 7 in. thick and 6 in. thick, respectively, the proportions in each group were as follows:

Production		Sales
75.4 per cent	No. 5	77 per cent
24.6 per cent	No. 4	23 per cent
100 per cent		100 per cent
63.4 per cent	No. 3	68.5 per cent
20.4 per cent	No. 2	15.9 per cent
16.2 per cent	No. 1	15.6 per cent
100 per cent		100 per cent

The following percentages are based on figures furnished by several railroads in producing territory, for 1928, covering purchases on their own lines of approximately five million ties:

No. 5—	34.3 per cent
No. 4—	9.6 per cent
No. 3—	34.5 per cent
No. 2—	11.6 per cent
No. 1—	5.7 per cent
S. R.—	4.3 per cent
	100 per cent

Again separating ties 7 in. and 6 in. thick, respectively, the following percentages were obtained:

No. 5—	78.1 per cent
No. 4—	21.9 per cent
	100 per cent
No. 3—	61.5 per cent
No. 2—	20.7 per cent
No. 1—	10.2 per cent
S. R.—	7.6 per cent
	100 per cent

The calendar year 1928 was chosen for in that year the investigation indicated a greater tendency upon the part of the railroads to accept cross ties more nearly in line with the natural or normal woods-run production.

The committee reported instances where ties were purchased as follows:

No. 5—None
No. 4—A large proportion
No. 3—Small proportion
No. 2—A large proportion
No. 1—Very small proportion

Such a specification immediately sets up a producing handicap, as it runs counter to the normal woods-run production. Thus, any purchaser who buys all No. 4 and No. 5 ties to come from any established producing territory in the middle west, can reasonably anticipate that the figures upon which his price is based are predicated upon delivering a large number of Grade 5 ties as Grade 4.

It is, of course, one of the functions of a tie contractor to produce, carry in stock and sell cross ties to various railroads which have different ideas as to the sizes preferred, as well as to the sizes that are sometimes entirely unacceptable. Railroads that purchase only sizes 5 and 4, or ties 7 in. thick can, however, help themselves if their requisitions are as nearly as possible 80 per cent No. 5 and 20 per cent No. 4. Likewise, those railroads using sizes 3, 2 and 1, or ties 6 in. thick, will help the tie producer fill his orders more easily and, therefore, more economically, by buying the various sizes as nearly as practical in the following percentages: 75 per cent No. 3, 15 per cent No. 2, and 10 per cent No. 1.

Those railroads which use all sizes, should base their purchases on approximately the following percentages:

30 per cent—No. 5
10 per cent—No. 4
40 per cent—No. 3
10 per cent—No. 2
10 per cent—No. 1

Discussion

C. F. Ford, supervisor, tie and timber department, Rock Island Lines, called attention to the fact that the producer attempts to make only two grades of ties, 3 and 5, and that, incidental to the production of these grades, it is necessary to cut timber which is not of sufficient size to make these grades and which, to avoid waste of timber and consequent increase in cost to the buyer of the two grades mentioned, is manufactured into grades 1, 2 and 4. Mr. Ford also called attention to the fact that the committee's figures showed that the buyers required 175,000 more grade 3 ties than were produced, requiring the manufacturer to draw on reserve stocks and also that the buyers did not accept the normal production of grades 1 and 2 by 155,000 ties, throwing the year's sales out of balance to the extent of 330,000 ties, or 6.6 per cent. Mr. Ford concluded by referring to such special demands for ties as arise in the construction of yard or side tracks which affect a railway's purchasing program and make difficult the balancing of its requirements to conform to run-of-woods production.

C. C. Warne, assistant purchasing agent, New York Central, took issue with the contention of the committee,

advocating that each road buy those sizes which best meet its needs and defining the function of the producer to be that of developing outlets for the less popular sizes. W. J. Burton, assistant to chief engineer, Missouri Pacific, added that the proper adjustment of prices for the different grades afforded a means for the disposition of the slower moving grades. John Foley, forester, Pennsylvania System, stated that the proportions of the various sizes presented in the report were not typical of eastern production. He also stated that these proportions will vary with the rigidity of the inspection. He concluded by urging the committee to collect similar statistics in other areas and then to analyze these variations and the reasons therefor.

Various Precautions Aid in Preventing Splitting of Ties

By R. R. Poux*

The information contained in the following paragraphs is based on careful observation and study throughout the last several years of ties received by the Erie, principally at northern treating plants and at some southern plants. The majority of the information pertains to the handling of ties at the treating plant although methods of protecting ties against defects before they are delivered to the railroad are also discussed to some extent.

The two items of major importance in the storing of ties are (1) proper stacking to prevent decay, including proper yard sanitation, and (2) proper stacking and the use of other methods to prevent the excessive checking or splitting of ties. The most effective methods of stacking ties to prevent premature decay have been fairly well established, the usual method being to stack the ties on creosoted stringers in the familiar arrangement of nine ties in a row with a transverse stringer at one end for each layer. When this method is used the stacks are generally made about 14 tiers high, the ties in each row being spaced in such a manner as to allow sufficient air-circulation.

The methods of stacking ties, the types of anti-checking devices used, the manner in which such devices are applied, the locality of the seasoning yard, the time of year in which the ties are cut, the size of the tree, the method of manufacturing the tie and the species of wood all have an important bearing on the rate and amount of checking to which the tie is susceptible. Because of this relatively large number of factors opinion regarding the best methods of retarding checking is considerably diversified.

Manufacture of Ties

Other factors being equal, ties cut in the early winter will develop fewer splits because the initial drying rate is slower and therefore this process will be more uniform throughout the tie. The method of sawing and hewing a tie also has an important influence on splitting during the seasoning process. This is demonstrated by a study of the percentages of split ties found among the various types in the seasoning yard, which are as follows: Boxed heart, 5 per cent; sawn 5 per cent; hewn 7 per cent; half heart, 12 per cent; pole 12.5 per cent; and quarter heart, 14 per cent.

When ties are being stacked by the producers in the summer, they may be piled in solid cribs if they are to be moved withing three weeks. If they are not to be moved within this period the layers of ties should be separated by strip spacers an inch or more in thickness, with sufficient spacing between individual ties to permit the circulation of air. Ordinarily the producer should not drive anti-checking irons unless it is apparent that a split is starting.

Application of Anti-Checking Devices

Anti-checking irons should be driven as soon as possible after the arrival of the ties at the treating plant. The importance of early application of the irons is shown by a study in which it was found that in a lot of ties in which the irons were driven within three weeks after the arrival of the ties splits developed in only 0.5 per cent of the total, whereas splits developed in three per cent of the ties in a similar group of ties in which the irons were driven 60 to 90 days after arrival.

The driving of anti-checking devices should be done by experienced men who have been taught so to locate the irons as to make them most efficient. Where there is no check apparent in the end of the tie, the long axis of the device is placed parallel with the tie faces and somewhat nearer the bearing face, i.e., the face with the greatest sapwood content, than the opposite face. Where checks have started the long axis of the iron should be driven at right angles to the check as nearly as this is possible. C-irons should not be driven nearer than ½ in. to the faces or edges of the tie.

In stacking ties the method described previously in this article is usually considered the most effective method of preventing decay infection. Using this method of stacking it was found in a study of several hundred piles that four per cent of the ties in the upper one-third, two per cent in the middle third and one per cent in the bottom third of the pile showed splits. The percentage of splits increases with the age of the ties, emphasizing the importance of treating them as soon as they have lost sufficient moisture to permit the proper injection of the preservative.

Use of End Coatings

A recent inspection of approximately 35,000 gum ties painted on both ends with a creosote-tar solution and also driven with S-irons at both ends showed that splitting and checking were considerably retarded by the end coatings, in comparison with about 5,000 ties which were supplied with S-irons but not painted. It is quite possible, therefore, that future specifications will require the end coating of gum ties and the application of anti-checking irons only in ties that show incipient splits. The cost of coating the ends of ties, including labor and material, has not been determined but it will be considerably less than the cost of applying anti-checking irons to all tie ends.

* Chief Treatment Inspector, Erie, Cleveland, Ohio.

The South Australian Railways for the year ending June 30, 1932, reported an operating profit for the first time since the fiscal year ending June 30, 1928. The 1931-32 operating ratio was 77.79 as compared with 103.69 in 1930-31 and 112.04 in 1929-30. Although the six per cent increase in 1931-32 gross revenues as compared with the previous year contributed somewhat it was the accompanying substantial reduction in operating expenses which reduced the deficit after interest charges by £775,284 or 46 per cent as compared with the 1930-31 deficit. The latter was £1,685,920 as compared with a 1931-32 net loss of £910,636. The 1931-32 gross revenue was £2,757,123 as compared with a 1930-31 gross of £2,600,559; the increase, the report says, was due principally to the "excellent wheat harvest," wheat traffic in 1931-32 being 43 per cent greater than in the previous year. While mineral traffic continued at low levels the report stated that there was "a satisfactory increase in general merchandise, thereby indicating improvement in general business."

Odds and Ends . . .

Musical Railroaders

Over 2,000 employees of the Great Western Railway of England recently competed in a three-day music festival at Reading. The contestants came from all parts of the railway system and included station masters, porters, trainmen, clerks, enginemen, signalmen and mechanics. The occasion was the tenth annual music festival organized by the Great Western Social and Educational Union, which is claimed to be the world's largest welfare society.

Dean of I. C. Dispatchers Dies

When John William Bledsoe, dispatcher at Champaign, Ill., died in Chicago in February, the Illinois Central lost the dean of its dispatchers. Mr. Bledsoe was appointed dispatcher on the Illinois Central at Mattoon, Ill., on August 28, 1889, thus beginning the first of his 43 years of service. Mr. Bledsoe remained at Mattoon until April 1, 1931, when the old Indiana division was absorbed by the Illinois and Springfield divisions, whereupon he was transferred to Champaign.

An Echo of Forgotten Advertising

Indisputable evidence that the Missouri-Kansas-Texas was an enthusiastic user of the selling force of advertising as long as 30 years ago was brought to light the other day in Dallas, Tex. This occurred when the building on the corner of Commerce and Austin streets was destroyed by fire. Subsequent exposure of the wall of the adjacent building revealed a gigantic advertising picture, 100 ft. in length, of a Katy passenger train. The sign was painted at least 30 years ago.

Unique Distinction

J. M. Hannaford, vice-chairman, retired, of the Northern Pacific, enjoys the distinction which can be claimed, probably, by few railroad men in the United States. In every annual report filed by the Northern Pacific with the Interstate Commerce Commission since 1888, Mr. Hannaford's name has appeared. The commission was organized in 1887 and in the annual report of the railway for that year his name appeared as traffic manager. Other titles followed Mr. Hannaford's name in succeeding years, including that of president from 1913 until 1918.

He Turned Down Millions

George M. Walker, a conductor on the Canadian National, who had a chance to become a millionaire as a partner of Henry Ford, has retired on a pension after more than 40 years of service with the company. Mr. Walker was the conductor of a train on the lines in Michigan when the automobile manufacturer was organizing a company to produce his cars, Mr. Ford often traveling as a passenger on Walker's train. The two men became acquainted and Ford offered Walker an opportunity to invest in his company, but, as it would have been necessary for him to mortgage his home to do so and as he had a family of six children to consider, Walker declined. Even now, he says that he has no regrets.

Anybody Want It?

A 10-ft. cast iron shaft, weighing 600 lb., today reposes as an extraordinary unclaimed express shipment in the headquarters building of the Northern Pacific at St. Paul, Minn. Constructed as a miniature model of the Washington monument, the shaft has been held for 40 years awaiting the call of its owner. It has been identified as one of the original boundary posts which marked the border of the United States and Canada. The legend on one side of the shaft reads "Convention of London", while that on the other side is "October 20, 1818". The history of the boundary post, in connection with the Northern Pacific, dates from the winter of 1889. In that year, E. W. Bennett, who is now supervisor of express of the Northern Pacific, was traffic superintendent of the Northern Pacific Express Company, with headquarters at St. Paul. The shaft was shipped from Pembina, N. D., and was sent in care of Mr. Bennett at St. Paul, the shipper apparently intending to claim it there. Why he has not done so during the past 40 odd years is not known. Through all these years the iron shaft has been the object of speculation regarding the purposes of the person who removed it from the ground. Set about six feet into the soil, it must have been necessary to make an excavation of some size to remove it from its site. Who conveyed it to the Pembina station for shipment has never been determined. Mr. Bennett's theory is that the boundary post was intended by the shipper to be used as a hitching post or to satisfy the strange yearning of some souvenir collector.

Another Pullman Passenger Clears His Conscience

It is all in the day's work for the Pullman Company to receive towels from conscience-stricken passengers who had surreptitiously appropriated them from Pullman cars, but every now and then a communication is received which makes officers of the company wonder anew at the persistence of the human conscience. Such was the communication received not long ago from a remorseful individual in Los Angeles, Cal. The letter, which has not been dressed up for publication, reads as follows:

The Pullman Car Co. Chicago Ill.

Dear Sir Herewith Is Two Dollars to Pay for A Comb and Brush that I stold out of A Pullman Sleeping Car the year of 1911. In Sandrancisco California. This Comb And Brush wear worth About 50 cts at that time, 25 cts each, so I am sending 2 Dollars to pay for the crime committed. The Bible 10 Commandments, though shall not steal, and No thief shall enter the Kingdom of Heaven. I would have made this wrong write Before now if It has Ben called to My Attention and I have had known the Truth. I hope this pays you for the Loss, and that it will excuse me for the Sin Committed at that time and place.

Co-ordination Saves the Day

The story of how co-ordination of two agencies of transportation, the railways and the airways, recently met an emergency, prevented the shutting down of a large automobile factory on the Pacific Coast and kept 600 men on the payroll who otherwise would have been laid off temporarily, is being told by officers of the Railway Express Agency. It seems that the Oakland, Cal., plant of the Chevrolet Motor Company had nearly exhausted its stock of certain motor parts essential to the contruction of the automobiles. New parts were on the way on board freight trains, but they were not scheduled to reach Oakland until a day or two after the time when the stock on hand would have been exhausted. Three thousand pounds of the parts were on a Santa Fe freight train in New Mexico and others were on a Union Pacific train east of Cheyenne, Wyo., when the factory's urgent request for quick action was received by the Railway Express Agency. Upon request of officers of the express agency to the Sante Fe, the freight train of this road was stopped at Belen, N. M., where seven cases of motor parts, weighing 279 lb., were taken off and put on board a limited passenger train enroute to Los Angeles. Upon arrival there at 7:30 a.m., the cases were placed on board a northbound express plane of the United Air Lines and which took off at 8:50 a.m. The parts arrived at the Oakland airport, 353 miles from Los Angeles, at 11:40 the same morning and delivery was immediately completed. From the Union Pacific train, four cases, weighing 186 lb., were taken off at Cheyenne. These were put on board a westbound transcontinental express plane, which left the Wyoming capital at 10:30 a.m., arriving at the Oakland airport at 8:30 p.m. the same day, from which they were promptly delivered to the automobile plant.

NEWS

I. C. C. Issues Rules For Reorganization Procedure

Special set of regulations tells how creditors of railroads may file petitions

The railroads having been rather slow so far about taking advantage of the provisions of the new bankruptcy law providing for railroad reorganizations, the Interstate Commerce Commission has issued a set of special rules to govern procedure under the act which indicate how the creditors of a railroad may file petitions seeking to bring about a reorganization.

Creditors of any railroad corporation having claims or interests aggregating not less than 5 per centum of all the indebtedness of such corporation as shown in the latest annual report, intending to file a petition with a court and desiring first to obtain the approval of the commission after hearing, as provided in section 77(a), are to file with the commission an application referred to as creditors' application.

Creditors' applications may be made either (1) by the creditors themselves, or (2) on their behalf by a duly authorized representative.

A creditors' application is required to show, among other information:

The facts relied upon to show that the creditors are entitled, subject to the approval of the commission, to file such petition viz: (a) that each applicant is a creditor or represents creditors of the railroad corporation; (b) that the railroad is insolvent or (as the case may be) is unable to meet its debts as they mature; (c) that the railroad has not filed a petition for reorganization under the provisions of section 77(a); (d) that the creditors propose that the railroad shall effect a reorganization, and desire to file a petition in court and seek the approval of the commission to that end; (e) the nature and amount, together with descriptive title, if any, of the claims or interests of such creditors, in such detail as to enable the commission to reach a conclusion as to the classification of the claims or interests as indebtedness of the railroad corporation; (f) the total amount of the claims or interests, and the total indebtedness of the railroad as shown in the latest annual report; (g) any other facts relied upon to show that the filing of a petition for reorganization of the railroad corporation should be approved by the commission.

A statement showing the nature and the respective amounts and maturity dates of the obligations of the railroad maturing within twelve months from the date of verification of the application.

Upon receipt of creditors' application, the commission, as provided by section 77(a) of the bankruptcy act, will order a hearing upon the application, and will give notice thereof to the applicant or applicants and the railroad.

Alton Sells Bus Line

The Alton Transportation Company, highway subsidiary of the Alton, has sold its bus line operating between Louisiana, Mo., and Jefferson City, to the Mark Twain Bus Company, Columbia, Mo. This line is 110 miles in length.

Cent-A-Mile Rate in Canada

The railways of Canada will operate coach excursions at fares of one cent a mile from western Canada to eastern Canada from May 24 to June 8, and from eastern Canada to western Canada from May 31 to June 15.

Federal Barge Line Authorized To Extend to Kansas City

Division 4 of the Interstate Commerce Commission has issued a report and order authorizing the Inland Waterways Corporation to extend its operations to the Missouri river between St. Louis and Kansas City, Mo., and requiring connecting rail carriers to join with it in establishing joint rates and through routes.

Associated Traffic Clubs Meeting

The semi-annual meeting of the Associated Traffic Clubs of America will be held at Peoria, Ill., on June 6-7. Besides reports of committees and the regular order of business, addresses will be made by Rome C. Stephenson, president of the St. Joseph Loan & Trust Company, South Bend, Ind., and former president of the Indiana Bankers' Association and the American Bankers' Association, on "Reorganization of the Rail Capital Structure"; by C. S. Duncan, economist of the Association of Railway Executives, Washington, D. C., on "Contributions of the Highway Users for the Use of the Highway"; by J. Paul Kuhn, president of the National Association of Railroad and Utilities Commissioners, on "Constructive Governmental Supervision of Motor Transport"; and by G. Lloyd Wilson, professor of commerce and transportation of the University of Pennsylvania, Pittsburgh, Pa., on "Technical Education in Traffic." At a banquet on June 6, Carl R. Gray, president of the Union Pacific, will be the principal speaker.

Eastern Railroads Act on Circuitous Routing

Revised tariffs to become effective on June 1 will virtually eliminate practice

A large number of circuitous routes in Eastern territory will be eliminated under revised tariffs which are to become effective June 1, according to a statement issued on May 9 by D. T. Lawrence, chairman of the Traffic Executive Association—Eastern Territory.

"The railroads in Eastern territory," the statement says "for some time past have been giving exhaustive study to economies in operation, including the practicability of eliminating circuitous and uneconomical routes.

"Following a meeting of traffic officers today, the third in a series of conferences for the review of circuitous routes in Eastern territory, it was announced that arrangements are being made for the filing of tariffs and supplements to take effect July 1, 1933, which it is expected will eliminate a large number of such circuitous routes."

The plan, it is understood, contemplates a more definite tie-up of routing guides with tariffs than has been the case heretofore. This will act as a restriction on the open routing since the routing guide will henceforth, by reference, be made a part of the tariff in all instances and the routing guide referred to in a particular tariff will indicate the only routes open at the rates published in such tariff. This action is based on a continuing study and further restrictions on any remaining circuitous routes are expected to follow.

This economy move of the Eastern roads follows their recent decision, also in the interest of economy, to discontinue the practice of contracting with outside companies for lighterage services in New York harbor.

Fuel Association Meeting

A regular meeting of the members of the International Railway Fuel Association for the purpose of electing officers, amending the constitution and by-laws, and transacting such other business as is necessary, will be held at the Hotel Sherman, Chicago, on Friday morning, June 16, at 10:30 Central Daylight Saving Time. Work on the preparation of committee reports has been aggressively carried on in spite of the temporary discontinuance of technical meetings of the association, and it is expected that reports for the year 1933 will be available in the form of published proceedings by next October.

Loree Sees Possibilities for Substantial Savings

President of Delaware & Hudson outlined rail economy plan in recent address

L. F. Loree, president of the Delaware & Hudson, in a recent address before the Economic Club of New York, discussed in further detail the possibilities for substantial savings in railway costs which he had previously outlined in a statement issued in Washington, D. C., as reported in the *Railway Age* of April 8, page 513.

Pointing out that "railroad troubles may be attacked by a frontal or by a flanking attack." Mr. Loree turned his attention to the latter, classifying railway activities as follows:

First—A field which the federal and state governments have entirely usurped and where the roads act, not upon their own corporate responsibility, but to carry out orders from the superior political powers.

Second—A large field where both parties are active, but action by the railroads can only be taken upon consent given by the political powers, usually after time-consuming public hearings.

Third—A field where the railroads may pursue their own initiative, subject to the restraints of a highly commercial and competitive functioning business.

In connection with the first of the foregoing Mr. Loree would effect savings through the repeal of the La Follette valuation act of 1913; the elimination of Interstate Commerce Commission power over reparation awards; the retroactive repeal of recapture; and an amendment to the Interstate Commerce act to deprive shippers of the right to route traffic. "At the rate which legislation is now being handled by Congress," Mr. Loree said, "we might look to see these four items covered in one bill and passed in a week, and the expenses of the railroads reduced by $15,000,000 annually."

Further potential annual savings under this first heading were listed by Mr. Loree as follows: Relief from non-productive property changes such as grade crossing eliminations, $45,000,000; relief from state full crew and train-limit laws, $6,600,000; and a 25 per cent reduction in taxes, $90,000,000.

Under the second heading Mr. Loree estimates that relief from depreciation and retirement requirements would save $225,000,000 annually; relief from automatic train control orders, $2,500,000; more liberal abondonment decisions whereby the railroads might be authorized to abandon the first year 30,000 miles of line, $75,000,000; relaxation of requirements to maintain unprofitable stations, $25,000,000; and permission to abandon unprofitable passenger services, $140,000,000.

In the third field—that in which railways have full power to act—Mr. Loree would modernize railway plant at a saving of $100,000,000; retire obsolete rolling stock and save on maintenance and through the use of more efficient equipment $137,500,000; improve shop equipment, retiring obsolete machinery and tools, and save $50,000,000; abandon miscellaneous buildings no longer needed with changed operating conditions and save $20,000,000.

Mr. Loree summarized the potential savings which he proposed as follows:

(a) Through action of the Government—seven items—immediate relief, $156,600,000.

(b) Through action of the Interstate Commerce Commission or State Commissions and the railroads—five items—immediate relief, $467,500,000.

(c) Through action by the railroads—five items—delayed relief, $307,500,000.

Total, $931,600,000.

"Were this done," Mr. Loree concluded, "the railroads might then well be eliminated from the picture of economic depression and no longer be so universally damned, but rather recognized as the useful and indispensable servants that they really are."

Railway Employment Declined in March

The number of railway employees reported by Class I railways, excluding switching and terminal companies, to the Interstate Commerce Commission as of the middle of March was 919,881, as compared with 941,544 as of the middle of February, according to the commission's preliminary statement of employment statistics. The reduction reflects the slackening of business resulting from the closing of the banks.

Convention of Superintendents' Association

The American Association of Railroad Superintendents will hold its thirty-ninth annual convention at the Hotel Cleveland, Cleveland, Ohio, on June 12-14, at which time there will be presented the reports that were prepared for the meeting originally scheduled to be held a year ago and postponed at that time. The Big Four railway will operate, for the convenience of members attending the convention, a special train leaving St. Louis, Mo., at 9:30 a.m. on Sunday, June 11, and arriving at Cleveland at 8:25 that evening.

Surcharge Required On Ohio Coal Rates

The Interstate Commerce Commission has issued a finding that the refusal of the Ohio Public Utilities Commission to permit the application of the surcharge applied to interstate rates to the intrastate rates on bituminous coal in Ohio constitutes an unjust discrimination against interstate commerce and an order requiring that the surcharge be applied so long as it is applied to interstate rates.

Great Northern Meals at "Coffee Shop" Prices

The Great Northern, in an effort to induce railroad patronage, has eliminated its $1 luncheons and $1.50 dinners and substituted meals ranging from 50 cents to $1.25. Instead of the $1 luncheon, three optional meals are offered at 50, 75, and 85 cents, while three optional dinners at 50, 75 and $1.25 replace the customary $1.50 meal. The new policy results from an experiment begun by the Great Northern several months ago, when a "chef's special" was called to the attention of passengers in the coaches. The experiment was so satisfactory that it was decided to extend the plan with the idea of encouraging rail travel by cutting down another expense incident to it.

Legislation in Maryland Extends Motor Regulation

Carriers for hire to be subjected to increased fees for their use of the highways

Fees for the use of the public highways, new size, weight and speed restrictions and other measures designed to subject motor carriers to more effective regulation are provided in legislation recently enacted in Maryland. Intrastate freight carriers are to be required to pay fees based on vehicle weights and carrying capacities while motor trucks operating for hire over interstate routes will henceforth be subject to assessments based on their gasoline consumption within Maryland; buses operating for hire—both intrastate and interstate—will be assessed one-eighteenth of a cent per seat-mile. All of the new laws except one become effective January 1, 1934, the exception being the act which fixes fees for intrastate trucks operating for hire but not over regular routes; provisions of this latter become operative from June 1.

Dealing with "Public Freight Motor Vehicles," i. e., carriers operated for hire between fixed termini or on regular schedules, the new legislation requires such operators to secure permits from the public service commission and to present these permits, with detailed data on their operations, to the commissioner of motor vehicles in making applications for certificates of registration. For the purpose of arriving at fees to be charged for these latter, vehicles, other than those electrically operated, are classified according to the number of axles, type of tires, manufacturers' shipping weights and rated carrying capacities.

Pneumatic-tired vehicles with two axles and those with three axles are each divided into six classes based upon "the gross shipping weight of the chassis as given and certified to by the manufacturer." Charges for the two-axle vehicles range from $30 for vehicles of less than 2,500 lb. weight to $260 for those of 7,500 lb. and over; fees for three-axle vehicles range from $50 for those of less than 3,500 lb. weight to $500 for those of 12,000 lb. and over.

Fees for vehicles wholly or in part equipped with solid tires are based on rated carrying capacity and range from $20 for vehicles of not more than 2,000 lb. capacity to $1,000 for those of 14,000 lb. capacity; if equipped with six wheels a solid-tired vehicle of not more than 20,000 lb. capacity is to be assessed $500.

Trailers equipped with rubber tires are, like pneumatic-tired trucks, classified in accordance with the manufacturers' shipping weight and fees range from $40 for a two-wheel semi-trailer of less than 1,000 lb. in weight to $500 for a six-wheel trailer weighing 9,000 lb. or more.

Motor vehicles operating over regularly scheduled routes or between fixed termini are to be subject to the foregoing charges, the only exemption being vehicles used exclusively "for hauling milk to cooling stations or freight platforms in the counties." Payment of these fees relieves the motor vehicle operator from payment of any other motor vehicle fees except property

taxes and gasoline taxes. It is provided, however, that this act shall not apply to contract carriers employed exclusively in the service of one consignor.

Fees for the vehicles of these latter as well as those of other freight carriers for hire, which do not maintain regular schedules or routes, are fixed at one-half the foregoing rates in another act which also provides assessments for electrically-propelled motor vehicles with pneumatic tires and for solid-tired vehicles propelled by other than internal combustion engines. Electrically-propelled, pneumatic-tired vehicles are assessed on a weight bases, in arriving at which the "shipping weight of the chassis, battery, body and load" are included; fees range from $60 for a two-axle vehicle of less than 6,000 lb. in weight to $400 for a three-axle vehicle weighing more than 36,000 lb. but less than 40,000 lb. Solid-tired vehicles propelled by other than internal combustion engines are assessed fees ranging from $20 for a vehicle of not more than 2,000 lb. rated carrying capacity to $500 for a vehicle of not more than 14,000 lb. capacity or a six-wheel vehicle of not more than 20,000 lb. capacity. Fees provided in this act are the ones which become effective June 1.

This act also stipulates in detail what gross weight limits shall be fixed for vehicles of specified manufacturers' shipping weights and fixes speed, size and weight limitations. Speed limits vary with weight, tire equipment and number of trailers. The width limit is fixed at 96 in. and the gross weight at 25,000 lb. for a four-wheel vehicle and 40,000 lb. for a six-wheel vehicle.

Both of these acts relating to intrastate motor trucks give the commission power to inspect all records of carriers operating under their provisions and to protect bona fide operators from unregulated competition.

The declared purpose of a third act is that "of requiring interstate motor carriers of freight or merchandise and interstate carriers of passengers for hire to pay a tax for the use and maintenance of the roads." These interstate operators are required to secure permits from the public service commission and present such permits together with data on their operations, to the commissioner of motor vehicles. Interstate buses are to be required to pay one-eighteenth of a cent per seat-mile operated in Maryland and every interstate truck must pay, as the law puts it, "a mileage tax of four cents for each gallon of gasoline or other motor fuel required to propel said vehicle over the route followed . . . in Maryland, it being the intention hereof to require such owner or operator to contribute to the maintenance and widening of the road system of the State an amount equivalent to the tax payable in connection with the purchase of motor fuel by the owner or operator of all motor vehicles operated within the State." Credits are to be allowed for gasoline purchased in Maryland upon which the Maryland gasoline tax is paid.

A fourth act provides for permits, and fees of one-eighteenth of a cent per seat-mile, for intrastate buses—school buses, etc., being exempt—while another requires motor carriers to be equipped with indemnity bonds and liability insurance.

Safety Circular For June

The campaign begun by the Safety Section, A. R. A., in 1930, to reduce casualties to employees 33 per cent by the end of 1933 is now in the home stretch, and the monthly exhortations of the Education Committee, designed to concentrate each month on one point, have about covered the field; and the circular for June simply calls upon all concerned to get behind President Roosevelt. His all-inclusive program to press forward on all fronts, must be assumed to include safety in railroad operation; so, "let's go."

I. C. C. Appropriation Bill Passed By House

The independent offices appropriation bill, carrying an appropriation of $5,040,000 for the Interstate Commerce Commission for the fiscal year 1934, was passed by the House on May 12 and sent to the Senate. The bill was reported by the Senate appropriations committee on May 16 with an addition of $150,000 for the general expenses of the commission to prevent the necessity for reducing so sharply the number of hearings held away from Washington.

Traveling Passenger Agents' Annual Meeting

The American Association of Traveling Passenger Agents held its fifty-seventh annual convention at Chicago on May 5 and 6. The first day was devoted to business, while the second day included a tour of the Century of Progress Exposition. H. E. Newcomet, vice-president of the Pennsylvania, F. P. DeHoyos, general agent of the National Railways of Mexico, and Captain John W. Gorby, an officer of A Century of Progress, were among the speakers at the convention.

Employees Urged to Qualify as Voters

Calling attention to the importance of inquiring carefully into the qualifications of candidates for state and local governmental offices, A. C. Needles, president of the Norfolk & Western, in a letter addressed to all the railroad's employees residing in Virginia, has urged that they pay their poll tax in order to qualify to participate in the November election. Approximately 10,500 copies of the letter are being distributed among the railway's workers throughout the state.

"In November of this year", the rail executive said, "The Commonwealth of Virginia will elect a governor, lieutenant-governor, members of the general assembly, as well as local governmental officers. The men so elected will frame the legislation by which you and all other members of the Norfolk & Western and our company will be governed. This legislation, and the policies of government that are sponsored by the representatives elected in November, will have a vital bearing upon your welfare and security. It is, therefore, fitting that all railroad employees and certainly all members of the Norfolk & Western Family —should be more keenly interested in our governmental representatives than ever before."

Emphasizing the importance of action to aid in the recovery of business, Mr. Needles told the railroad's employees, "you have a duty to yourself, your family and the company for which you work, to inquire carefully into the qualifications of the candidates for office and to participate in the selection of those who stand for economy in government, equality of opportunity for all forms of transportation and a lightening of the tax burden."

House Committee Eliminates Salary Limitation Of Senate Bill

The salary limitation of $17,500 a year imposed as a condition upon companies borrowing hereafter from the Reconstruction Finance Corporation, in a bill recently passed by the Senate, was eliminated by the House banking and currency committee on May 17 when it reported the bill to the House. The salary limitation was attached to a bill providing for loans to insurance companies but was made applicable to all companies receiving loans from the R. F. C.

Eastern Executives Consider Passenger Fares

Eastern railway executives met at New York on May 12 to discuss proposed reductions in basic passenger rates. It is understood that the conference had before it a proposal of Western executives that basic fares be cut to three cents a mile, with the surcharge eliminated, for Pullman travel and to two cents a mile for coach travel. The proposal also suggests the sale of mileage scrip books, good for either coach or Pullman travel, at 2.75 cents a mile.

Shippers' Testimony In Rate Investigation Concluded

The presentation of testimony on behalf of shippers' organizations that are seeking a general reduction in freight rates on basic commodities at the hearing before Division 8 of the Interstate Commerce Commission which has been in progress since April 24, was concluded on May 16 and testimony on behalf of the railroads will begin on May 25. A large number of the shippers asked reductions of 25 or 33 1/3 per cent on the ground that freight rates are out of line with commodity prices and are tending to drive traffic to competing forms of transportation. To expedite the hearing and get through on schedule time it was necessary during the last week or so of the hearings to hold two simultaneous sessions in different hearing rooms.

Steamship Fares on Installment Plan

From San Francisco, Cal., to Europe by way of the Panama Canal or by railroad by way of New York; from Marseilles to London by train through the Swiss Alps, or anywhere, all on 25 per cent down and a year to pay, is the substance of an installment plan of travel offered by the General Steamship Corporation, Ltd., a Pacific coast travel agent at San Francisco. Under the plan, the traveler may choose his routing and, after an initial payment of 25 per cent, take the trip. The remainder of the cost of the trip can be paid in 10 monthly installments, beginning two months after starting the trip. No co-makers or endorsers are required under ordinary cir-

cumstances. The cost of the trip includes the steamship and railroad fare and hotel and other expenses connected with the trip as long as one portion of the journey is made by water.

National Industrial Recovery Act Proposed

An authorization to the President to "aid in the financing of such railroad maintenance and equipment as may be approved by the Interstate Commerce Commission as desirable for the improvement of transportation facilities" is included among the provisions of the bill introduced in Congress on May 17 upon the recommendation of the President, proposing the enactment of the National Industrial Recovery Act. In addition to provisions for a great co-operative movement throughout all industry "to obtain wide re-employment, to shorten the working week, to pay a decent wage for the shorter week and to prevent unfair competition and disastrous over-production" the bill includes provision for a comprehensive program of public works totalling $3,300,000,000 to be administered under authority of the President and a Federal Emergency Administration of Public Works, which also includes construction of rivers and harbors improvements, and construction of naval vessels and authorizes the President to make grants to states not exceeding $400,000,000 for expenditure in emergency construction on the federal aid highway system and extensions thereof, including the separation of grades at crossings, the reconstruction of existing railroad grade crossing structures, the relocation of highways to eliminate grade crossings, widening of bridges, etc.

In his message to Congress advocating passage of the legislation, after outlining the objective of the "great co-operative movement," the President proposed provision for relief from the anti-trust laws to permit voluntary agreements in industry on "codes of fair competition" but with a vigorous licensing power in order to meet rare cases of non-co-operation and abuse."

Tie Stocks Reduced

The supply of cross ties in the hands of tie producers on April 1 was smaller than in any previous month this year and was also the smallest stock of record, according to reports made to the Railway Tie Association by companies handling approximately 85 per cent of the commercial output. The number of ties in the yards of these companies on April 1, 1933 totaled 5,655,550, as compared with 5,700,032 on March 1, 1933; 5,736,526 on February 1; and 5,745,597 on January 1; and 7,612,-885 on April 1, 1932. The stocks on April 1 of this year showed a 26 per cent reduction from the corresponding stocks on April 1, 1932.

Of the ties on hand on April 1 of this year, 461,723, or approximately 8 per cent of the total, were ties for use untreated, while 4,133,389, or 73 per cent, were oak ties for treatment; and 1,060,438, or approximately 19 per cent were ties of all other species for treatment. The total of 461,723 ties on hand for use on April 1, untreated, is contrasted with 448,209 on March 1; 431,522 on February 1; 451,080 on January 1; and 583,386 on April 1, 1932. The 4,133,389 oak ties are contrasted with 4,168,736 on March 1; 4,249,401 on February 1; 4,160,711 on January 1; and 5,-375,054 on April 1, 1932, while the number of other species on hand April 1 is contrasted with 1,822,883 on March 1; 1,055,-597 on February 1; 1,133,808 on January 1; and 1,654,445 on April 1, 1932.

The largest quantity of ties in stock on April 1 was in the district comprising the states of Kentucky, Tennessee, Alabama, Mississippi and that part of Louisiana east of the Mississippi river and amounted to 2,384,525 ties, while the second largest inventory, consisting of 1,695,161 ties, was in the district including the states of New York, Pennsylvania, New Jersey, Delaware, Maryland, Ohio, Indiana and Illinois. The next largest number of ties, consisting of 1,333,075 ties, were in the district comprising the states of Nebraska, Iowa, Kansas, Missouri, Oklahoma, Arkansas, Texas and that part of Louisiana west of the Mississippi river. Of the total number of ties on hand on April 1, 1933, 67 per cent were 8-ft. ties and 33 per cent 8-ft. 6-in. ties.

Need for Local Taxes No Reason for Maintaining Railroad

Examiner Thomas F. Sullivan of the Interstate Commerce Commission has declined to be impressed with arguments made by public officials of West Virginia that the Norfolk & Western should not be allowed to abandon an unprofitable line of 53.8 miles between Wayne and Lenore in that state because its taxes are needed to support highway bonds issued for the building of a parallel hard-surface highway and has recommended to the commission in a proposed report that it authorize the abandonment of the line.

The company had shown that the continued operation of the line is not justified by the traffic presently available or in prospect and that such operation results and will result in heavy deficits, but representatives of the state, public service commission, and of the counties and districts involved, protested against the abandonment, stating that the applicant company is prosperous and that the loss involved is but a fraction of one per cent of its net income. They also showed that highway bonds had been issued by Wayne and Mingo counties and districts thereof, that a representative of the company aided in the campaign for the issuance of some of these bonds in 1917, and that the loss of taxes resulting from the abandonment of the line will impair the ability of the political units involved to meet their obligations under such indebtedness. It was also shown that at the time the railroad line was built donations of land for right of way were made by residents of the area.

"Neither of these matters", the examiner says, "can have any controlling effect upon the disposition of the present case." It does not appear from the record, he says, that the area would be subjected to serious and irreparable injury. "The traffic available is and will continue to be very light, there is no important industry served, and the line is paralleled for more than forty miles by good highways. . . The out-of-pocket cost of operating the branch, exclusive of taxes, substantially exceeds the total revenue accruing to the applicant from traffic moving to and from the branch, and the future holds no prospect of improvement."

Western Railway Club Holds Annual Meeting

Nearly 600 members and guests of the Western Railway Club attended the annual meeting and dinner at the Hotel Sherman, Chicago, on Monday evening, May 15, this meeting being one of the largest and most successful in the history of the club. The principal address was delivered by H. A. Wheeler, president, Railway Business Association, who presented the subject "Regulation of Transportation in Light of 1933 Developments". Mr. Wheeler was introduced by Samuel O. Dunn, editor, *Railway Age*, and chairman of the board, *Simmons-Boardman Publishing Company*.

At the business session presided over by Retiring President O. E. Ward, superintendent of motive power, Chicago, Burlington & Quincy, Lines East, the following officers were elected for the ensuing year: President, J. E. Bjorkholm, assistant superintendent of motive power, Chicago, Milwaukee, St. Paul & Pacific, Milwaukee, Wis.; first vice-president, A. N. Williams, president and general manager, Chicago & Western Indiana, Chicago; second vice-president, Lee Robinson, assistant to general superintendent of motive power, Illinois Central, Chicago; secretary, C. L. Emerson, division master mechanic, Chicago, Milwaukee, St. Paul & Pacific, Chicago; and treasurer, J. W. Fogg, MacLean-Fogg Lock Nut Company, Chicago. Board of Directors: W. A. Bender, master car builder, Alton, Bloomington, Ill.; J. E. Buker, vice-president, Vapor Car Heating Company, Chicago; J. T. Gillick, vice-president, Chicago, Milwaukee, St. Paul & Pacific, Chicago; F. W. Rosser, general manager, Erie, Youngstown, Ohio; D. C. Curtis, chief purchasing officer, Chicago, Milwaukee, St. Paul & Pacific, Chicago; J. H. Nash, Dri-Steam Valve Company, Chicago; H. P. Allstrand, principal assistant superintendent motive power and machinery, Chicago & North Western, Chicago; C. T. Ripley, chief mechanical engineer, Atchison, Topeka & Santa Fe, Chicago; G. F. Slaughter, American Steel Foundries, Chicago; J. C. Shreeve, superintendent of motive power, Elgin, Joliet & Eastern, Joliet, Ill.; P. J. Colligan, general superintendent of motive power, Chicago, Rock Island & Pacific, Chicago; O. E. Ward, superintendent of motive power, Chicago, Burlington, & Quincy, Chicago.

Increasing Use of Motor Trucks in Hauling Perishable Farm Crops

Motor-trucked receipts of fruits and vegetables in eight markets last year—Boston, New York, Philadelphia, Kansas City, Denver, Salt Lake City, San Francisco, and Los Angeles—were equivalent to 158,-000 carloads as compared with 136,000 carloads in 1931, according to figures compiled by the Bureau of Agricultural Economics, U. S. Department of Agriculture. The trucked receipts were approximately 37 percent of the unloads of rail, boat and truck shipments combined, and in the preceding year 31 percent. The bureau says

there is some movement by truck direct to retailers and consumers, for which reports are not available, in addition to the reported truck receipts at central markets. Motor truck unloads in Philadelphia in 1932 were equivalent to nearly 30,000 cars as contrasted with 42,000 cars hauled by rail and boat. In New York City, truck unloads of 53,000 cars were about 26 percent of the domestic supply; in Boston, 23 percent, and in Los Angeles, 77 percent. The bureau estimates that 41 percent of the 1932 potato crop of the intermediate and late crop states marketed up to January 1 this year was hauled to consuming markets by motor truck. In Delaware and the Eastern Shore section of Maryland and Virginia last year, about 84 percent of the cantaloupe shipments, and 77 percent of the strawberry shipments went to market by truck. There is also a large redistribution by trucks operating out of large markets to surrounding territory.

The bureau finds that considerable quantities of fruits and some vegetables are trucked 500 miles or more to market, but that most of the truck movement is within a radius of 100 to 150 miles. Last year, 89 percent of the New York City truck receipts came from New York state and adjacent states; 90 percent of the Philadelphia truck receipts came from Pennsylvania and adjacent states.

The bureau finds, however, that trucking has tended to place marketing control in the hands of numerous peddlers who may be poorly informed and relatively inexperienced in marketing, and that this may have a tendency to weaken prices.

Operating Revenues and Operating Expenses of Class I Steam Railways in the United States

Compiled from the Monthly Reports of Revenues and Expenses for 150 Steam Railways

FOR THE MONTH OF MARCH, 1933 AND 1932

Item	United States		Eastern District		Southern District		Western District	
	1933	1932	1933	1932	1933	1932	1933	1932
Average number of miles operated	240,626.15	241,058.50	58,916.26	59,076.60	45,884.97	46,191.83	135,824.92	135,790.07
Revenues:								
Freight	$174,916,270	$224,321,232	$75,558,421	$100,181,287	$37,249,003	$44,387,083	$62,108,846	$79,752,862
Passenger	21,885,552	34,337,030	13,229,701	20,398,903	3,143,306	4,534,974	5,512,545	9,403,153
Mail	7,667,097	8,445,040	3,015,326	3,318,832	1,337,046	1,483,788	3,314,725	3,642,420
Express	3,249,115	5,723,469	1,441,049	2,546,593	687,780	1,063,377	1,120,286	2,113,499
All other transportation	5,466,005	7,069,879	3,152,754	4,097,154	484,161	638,296	1,829,090	2,334,429
Incidental	3,973,667	5,536,799	2,325,948	3,231,988	620,527	768,289	1,027,192	1,536,522
Joint facility—Cr	620,405	740,253	194,140	226,234	129,971	137,350	296,294	376,669
Joint facility—Dr	178,653	252,064	48,671	68,658	17,029	19,401	112,953	164,005
Railway operating revenues	217,599,458	285,921,638	98,868,668	133,932,333	43,634,765	52,993,756	75,096,025	98,995,549
Expenses:								
Maintenance of way and structures	22,591,895	30,760,491	8,944,823	13,590,620	4,815,839	6,450,666	8,831,233	10,719,205
Maintenance of equipment	45,751,434	57,280,074	19,991,251	26,366,862	8,698,832	10,444,421	17,061,351	20,468,791
Traffic	6,996,433	8,447,939	2,571,567	3,250,766	1,388,420	1,579,423	3,036,446	3,617,750
Transportation	86,583,735	106,108,276	40,170,772	50,539,980	14,848,221	17,574,329	31,564,742	37,993,967
Miscellaneous operations	1,824,614	2,502,770	947,805	1,274,720	241,170	316,922	635,639	911,128
General	11,963,261	13,827,043	5,140,242	6,049,108	1,957,384	2,385,270	4,865,635	5,392,665
Transportation for investment—Cr.	416,094	346,468	262,055	125,882	44,019	18,296	110,020	202,290
Railway operating expenses	175,295,278	218,580,125	77,504,405	100,946,174	31,905,847	38,732,735	65,885,026	78,901,216
Net revenue from railway operations	42,304,180	67,341,513	21,364,263	32,986,159	11,728,918	14,261,021	9,210,999	20,094,333
Railway tax accruals	22,284,332	24,899,794	9,104,464	9,976,042	4,475,174	4,812,480	8,704,694	10,111,272
Uncollectible railway revenues	81,639	94,137	34,099	45,233	9,222	10,768	38,318	38,136
Railway operating income	19,938,209	42,347,582	12,225,700	22,964,884	7,244,522	9,437,773	467,987	9,944,925
Equipment rents—Dr. balance	6,525,471	6,866,016	3,149,410	3,418,380	522,750	377,307	2,853,311	3,070,329
Joint facility rent — Dr. balance	2,864,737	2,870,225	1,490,724	1,489,880	302,625	214,150	1,071,388	1,166,195
Net railway operating income	10,548,001	32,611,341	7,585,566	18,056,624	6,419,147	8,846,316	*d* 3,456,712	5,708,401
Ratio of expenses to revenues (per cent)	80.56	76.45	78.39	75.37	73.12	73.09	87.73	79.70

FOR THREE MONTHS ENDED WITH MARCH, 1933 AND 1932

Item	United States		Eastern District		Southern District		Western District	
	1933	1932	1933	1932	1933	1932	1933	1932
Average number of miles operated	240,684.97	241,026.18	58,920.18	59,075.51	45,884.99	46,141.12	135,879.80	135,809.55
Revenues:								
Freight	$522,514,245	$636,818,664	$226,958,370	$281,427,198	$114,196,301	$126,774,173	$181,359,574	$228,617,293
Passenger	72,081,020	106,117,333	43,341,980	62,564,703	9,899,263	13,691,331	18,839,777	29,861,299
Mail	22,524,439	24,671,624	8,752,844	9,620,116	3,910,010	4,258,630	9,861,585	10,792,878
Express	7,941,017	13,897,383	3,401,230	6,089,186	1,899,681	2,796,169	2,640,106	5,012,028
All other transportation	16,354,802	20,635,925	9,419,717	11,850,154	1,468,380	1,765,585	5,466,705	7,020,186
Incidental	12,474,813	17,096,386	7,276,461	9,958,731	1,877,069	2,353,067	3,321,283	4,784,588
Joint facility—Cr	1,912,760	2,298,093	596,614	698,639	384,238	404,320	931,908	1,195,134
Joint facility—Dr	570,437	732,022	152,871	199,049	56,153	58,038	361,413	474,935
Railway operating revenues	655,232,659	820,803,386	299,594,345	382,009,678	133,578,789	151,985,237	222,059,525	286,808,471
Expenses:								
Maintenance of way and structures	66,798,866	89,139,383	26,836,201	38,847,805	14,691,746	19,257,175	25,270,919	31,034,403
Maintenance of equipment	138,069,297	169,233,403	60,647,823	76,697,193	26,660,124	31,235,030	50,761,350	61,301,180
Traffic	21,223,824	25,679,597	7,854,875	9,813,710	4,135,672	4,890,251	9,233,277	10,975,636
Transportation	260,137,084	320,388,494	120,592,701	151,019,635	44,403,107	52,850,417	95,141,276	116,518,442
Miscellaneous operations	5,592,560	7,932,822	2,847,885	3,981,578	729,541	1,046,243	2,015,134	2,905,001
General	36,399,248	41,698,095	15,653,446	18,285,739	6,113,582	7,216,685	14,632,220	16,195,671
Transportation for investment—Cr.	886,514	908,925	448,143	311,666	116,800	72,776	321,571	524,483
Railway operating expenses	527,334,365	653,162,869	233,984,788	298,333,994	96,616,972	116,423,025	196,732,605	238,405,850
Net revenue from railway operations	127,898,294	167,640,517	65,609,557	83,675,684	36,961,817	35,562,212	25,326,920	48,402,621
Railway tax accruals	65,880,414	72,873,873	26,542,648	28,992,845	13,066,704	14,102,109	26,271,062	29,778,919
Uncollectible railway revenues	227,035	229,219	86,395	90,034	26,295	30,151	114,345	109,034
Railway operating income	61,790,845	94,537,425	38,980,514	54,592,805	23,868,818	21,429,952	*d* 1,058,487	18,514,668
Equipment rents—Dr. balance	19,507,643	20,666,857	9,939,574	10,570,157	1,384,464	1,303,771	8,183,605	8,792,929
Joint facility rent — Dr. balance	8,373,818	8,392,485	4,274,211	4,349,502	933,323	774,028	3,166,284	3,268,955
Net railway operating income	33,909,384	65,478,083	24,766,729	39,673,146	21,551,031	19,352,153	*d* 12,408,376	6,452,784
Ratio of expenses to revenues (per cent)	80.48	79.58	78.10	78.10	72.33	76.60	88.59	83.12

d Deficit or other reverse items.

Compiled by the Bureau of Statistics, Interstate Commerce Commission. Subject to revision.

Continued on next left-hand page

Equipment and Supplies

LOCOMOTIVES

The United Fruit Company is inquiring for two 2-8-2 type locomotives.

The Campanhia Nacional de Cimento Portland, Brazil, has ordered two 0-4-0 type meter gage tank locomotives from the American Locomotive Company. These locomotives will have 12 in. by 18 in. cylinders, 32 in. drivers and a total weight in working order of 53,000 lb.

FREIGHT CARS

The United States Navy Department has ordered five narrow-gage flat cars and three box cars of 30 tons' capacity from the Koppel Industrial Car & Equipment Company. Inquiry for this equipment was reported in the *Railway Age* of April 1.

IRON AND STEEL

The Missouri Pacific is inquiring for 950 tons of structural steel for a bridge at Myrtle, Ark.

The Chicago Great Western has ordered 3000 tons of rails, placing 2000 tons with the Illinois Steel Company and 1000 tons with the Inland Steel Company.

SIGNALING

Southern Pacific.—This company has asked the Interstate Commerce Commission to be relieved of the requirement of further operation of automatic train stop devices as required by the commission's orders of 1922 and 1924, between Oakland, Calif., and Fresno, 203.3 miles. The company had installed the National Safety Appliance Company's intermittent inductive type.

MISCELLANEOUS

The Western Maryland has ordered 2,000 Evertite rail joints for 90-lb. rail from Standard Equipments, Inc., New York.

The Baltimore & Ohio has sold to steel companies a considerable quantity of scrap iron and steel to be obtained from dismantled cars and locomotives. While the exact tonnages involved were not officially announced, reports from the Pittsburgh district were to the effect that as many as 400 old locomotives and 15,000 cars were involved.

Construction

Bangor & Aroostook.—A contract has been awarded to the Roberts & Schaefer Company, Chicago, for the design and construction of a reinforced concrete, automatic electric, locomotive coaling plant to be erected at Oakfield, Me.

Northern Alberta.—This company contemplates the expenditure in 1933 of approximately $442,000 for improvements and maintenance projects, including a number of new bridges and stations and the reconstruction of existing bridges and culverts, as well as general maintenance work. All work will be handled by company forces.

Union Pacific.—A contract has been awarded to the Roberts & Schaefer Company, Chicago, for the construction of a fireproof, automatic electric, locomotive coaling plant at Pleasant Valley, Ore.

Supply Trade

The Whiting Corporation, Harvey, Ill., has moved its Chicago office to 140 South Dearborn street.

Frederic B. Platt has been appointed eastern representative of the **T-Z Railway Equipment Company** and **Morris B. Brewster Company, Inc.,** of Chicago. Mr. Platt's headquarters are at Boston, Mass.

Frank A. Hiter, sales manager of the **Alemite Corporation,** Chicago, a subsidiary of the Stewart-Warner Corporation, has been appointed sales manager of the parent company and subsidiaries, to succeed **W. J. Zucker,** vice-president, general sales manager and secretary, resigned.

The Canton Tank Car Company, Chicago, has moved its general offices from 310 South Michigan avenue, Chicago, to 621 Perry Payne building, Cleveland, Ohio. **H. S. Woodruff,** vice-president, has resigned to engage in other business and the office of vice-president has been abolished.

The Bucyrus-Erie Company, South Milwaukee, Wis., has acquired the drill business of the **Armstrong Manufacturing Company. George R. Watson,** formerly president of the Armstrong Manufacturing Company, has become associated with the Bucyrus-Erie Company and is in charge of the drill business.

The Wood Preserving Corporation, Koppers building, Pittsburgh, Pa., has established an operating unit, which will be supervised by **Reamy Joyce** and **Sherman S. Watkins,** formerly of the Joyce-Watkins Company, Chicago. The activities of Messrs. Joyce and Watkins will be principally in connection with the Baltimore & Ohio cross tie production and in the operation of the Green Spring, West Va., treating plant.

The Gale Service & Construction Company has been organized with offices in the Railway Exchange building, Chicago, to engage in the construction and repair of boiler washing facilities, water softening systems, water supply systems and brick, concrete and frame buildings. All of the employees, officers and stockholders of the company were employees of the National Boiler Washing Company of Illinois. The officers are: **Frederick A. Gale,** president; **Walter C. Thatcher,** vice-president and chief engineer; and **M. S. Bachman,** secretary and treasurer.

The Pressed Steel Car Company, having been handicapped in its efforts to refund its 10-year 5 per cent convertible gold debentures due January 1, 1933, by suits of individual bondholders, although the indentures securing these debentures provides that action can only be taken by 25 per cent of the holders through the trustee, to avoid giving a preference to these bondholders, acquiesced to the appointment at Pittsburgh, Pa., on May 11, 1933, of **George D. Wick** and **Frank N. Hoffstot,** president of the company, as receivers, by Judge R. M. Gibson of the United States District Court. The company has no other creditors.

Arthur S. Goble, on May 1, became associated with the **Hanna Stoker Company** as vice-president with duties including jurisdiction over the sales department. Mr. Goble's headquarters will be at Cincinnati, Ohio. In 1904 he completed a course in chemical engineering at the University of Illinois and the same year entered the service of the Chicago & North Western as assistant to the chemist and engineer of tests. He left that road in 1911 to enter the sales departments of the Baldwin Locomotive Works and the Standard Steel Works Company, in the New York office and later served in the Chicago office. The last 14 years of his service with these companies he was district manager at St. Louis, Mo., in charge of sales matters in the southwestern section of the United States. Mr. Goble left that service in August, 1932, after a period of 22 years with these companies.

Arthur S. Goble

OBITUARY

J. W. Bettendorf, president of the Bettendorf Company, Bettendorf, Iowa, died on May 16 at his home in Bettendorf, at the age of 68.

Harry C. Moll, for the past five years manager of the Honolulu, Hawaii, office of the Koppel Industrial Car & Equipment Company, Koppel, Pa., died at Honolulu on May 6, from injuries received in an automobile accident.

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Financial

Atlantic Coast Line.—*Annual Report.* —The 1932 annual report of this company shows net deficit, after interest and other charges, of $6,685,229, as compared with net income of $2,020,858 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
Railway Operating Revenues	$37,268,564	$54,088,005	–$16,819,441
Maintenance of way	5,809,113	7,956,881	–2,147,768
Maintenance of equipment	8,205,504	10,862,488	–2,656,984
Transportation	14,795,163	20,105,138	–5,309,975
Total Operating Expenses	32,270,877	43,188,471	–10,917,594
Operating ratio	97.26	88.68	+8.58
Net Revenue from Operations	4,997,687	10,899,534	–5,901,847
Railway tax accruals	3,975,000	4,775,000	–800,000
Railway operating income	1,009,088	6,111,407	–5,102,319
Non-operating income	1,736,205	5,121,913	–3,385,708
Gross Income	2,745,293	11,233,320	–8,488,027
Rent for leased roads	82,576	82,576	......
Interest on funded debt	*6,322,207	6,322,207	......
Total Deductions from Gross Income	9,430,523	9,212,462	+218,061
Net Income	†6,685,229	2,020,858	–8,706,087

* Does not include interest on company's bonds held in treasury or pledged.
† Deficit.

Bangor & Aroostook.—*Abandonment.*—This company has applied to the Interstate Commerce Commission for authority for the abandonment of its line from Oldtown, Me., to South Lagrange, 15 miles.

Chesapeake & Ohio.—*Annual Report.*—The 1932 annual report of this company shows net income, after interest and other charges, of $23,527,755, as compared with net income of $26,696,484 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
Railway Operating Revenues	$98,725,859	$119,552,170	–$20,826,311
Maintenance of way	10,382,493	15,397,178	–5,014,685
Maintenance of equipment	16,873,477	22,704,390	–5,830,913
Transportation	23,080,948	30,172,791	–7,091,843
Total Operating Expenses	55,865,115	74,497,861	–18,532,746
Operating ratio	56.7	62.3	–5.6
Net Revenue from Operations	42,760,744	45,054,309	–2,293,565
Railway tax accruals	9,341,428	9,624,880	–283,452
Railway operating income	33,402,330	35,417,455	–2,015,125
Equipment rents—Net	557,945	1,109,773	–551,828
Joint facility rents—Net	1,458,006	1,197,285	–260,721
Net Railway Operating Income	32,502,269	35,329,944	–2,827,674
Gross Income	34,306,302	37,598,665	–3,292,364
Rent for leased roads	36,826	53,226	–16,400
Interest on debt	10,618,569	10,721,065	–102,495
Total Deductions from Gross Income	10,778,547	10,902,182	–123,635
Net Income	23,527,755	26,696,484	–3,168,729

Cincinnati, New Orleans & Texas Pacific.—*Annual Report.*—The 1932 annual report of this company shows net income, after interest and other charges, of $296,546, as compared with net income of $622,176 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
Average Mileage Operated	337.87	338.17	–.30
Railway Operating Revenues	$10,126,102	$14,388,299	-$4,262,197
Maintenance of way	1,321,142	2,580,700	–1,259,558
Maintenance of equipment	2,728,989	3,538,655	–808,666
Transportation	2,949,157	4,337,939	–1,388,782
Total Operating Expenses	7,851,083	11,550,826	–3,699,743
Operating ratio	77.53	80.28	–2.75
Net Revenue from Operations	2,275,019	2,837,474	–562,455
Railway tax accruals	620,019	790,685	–170.666
Equipment rents	148,554	71,798	+76,756
Joint facility rents	65,708	71,769	–6,061
Operating Income	1,737,111	2,046,108	–308,997
Non-operating income	295,064	387,618	–92,554
Gross Income	2,032,175	2,433,727	–401,552
Rent for leased roads	1,636,575	1,642,755	–6,180
Total Deductions from Gross Income	1,735,629	1,811,550	–75,921
Net Income	296,546	622,176	–325,630

Colorado & Southern.—*Annual Report.* —The 1932 annual report of this company shows net deficit, after interest and other charges, of $733,888, as compared with net income of $522,354 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
Railway Operating Revenues	$12,141,282	$16,837,180	–$4,695,398
Maintenance of way	1,517,605	2,094,095	–576,490
Maintenance of equipment	2,239,458	2,845,049	–605,591
Transportation	4,123,448	5,534,618	–1,411,170
Total Operating Expenses	8,742,003	11,866,795	–3,124,792
Operating ratio	72.00	70.48	+1.52
Net Revenue from Operations	3,399,279	4,970,385	–1,571,106
Railway tax accruals	1,066,040	1,304,416	–238,376
Railway operating income	2,329,174	3,659,533	–1,330,359
Hire of equipment—Net Dr.	370,969	473,761	–102,792
Joint facility rents—Net Dr.	266,230	217,591	+48,639
Net Railway Operating Income	1,691,975	2,968,180	–1,276,205
Non-operating income	364,995	384,766	–19,771
Gross Income	2,056,970	3,352,946	–1,295,976
Interest on funded debt	2,697,252	2,737,627	–40,375
Total Deductions from Gross Income	2,790,858	2,830,592	–39,734
Net Income	*733,888	522,354	–1,256,242

*Deficit

Duluth, South Shore & Atlantic.—*Abandonment.*—This company has applied to the Interstate Commerce Commission for authority for the abandonment of its line from Marengo Junction, Wis., to Superior, 73.52 miles.

Florida East Coast.—*Annual Report.*—The 1932 annual report of this company shows net deficit, after interest and other charges, of $3,316,630, as compared with net deficit of $2,395,046 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
Average Mileage Operated	858.83	864.50	–5.67
Railway Operating Revenues	$6,720,794	$9,379,029	–$2,658,236
Maintenance of way	1,301,742	1,401,861	–100,119
Maintenance of equipment	1,612,033	1,674,876	–62,843
Transportation	1,987,903	2,771,492	–783,588
Total Operating Expenses	5,701,051	6,859,850	–1,158,799
Operating ratio	84.8	73.1	+11.7
Net Revenue from Operations	1,019,743	2,519,180	–1,499,437
Railway tax accruals	866,626	1,196,339	–329,713
Railway operating income	153,044	1,317,873	–1,164,829
Equipment rents—Net Dr.	386,015	595,218	–209,203
Joint facility rents—Net Dr.	48,805	58,018	–9,214
Net Railway Operating Income	*281,776	664,636	–946,412
Non-operating income	97,852	87,865	+9,987
Gross Income	*183,924	752,502	–936,425
Interest on funded debt	3,027,767	3,037,250	–9,483
Total Deductions from Gross Income	3,132,707	3,147,548	–14,841
Net Deficit	3,316,630	2,395,046	+921,584

* Debit.

Great Northern.—*Annual Report.*—The 1932 annual report of this company shows net deficit, after interest and other charges, of $13,405,439, as compared with net income of $5,325,907 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
Average Mileage Operated	8,408.70	8,357.32	+51.38
Railway Operating Revenues	$55,549,246	$77,087,455	–$21,538,208
Total Operating Expenses	45,655,673	55,285,953	–9,630,281

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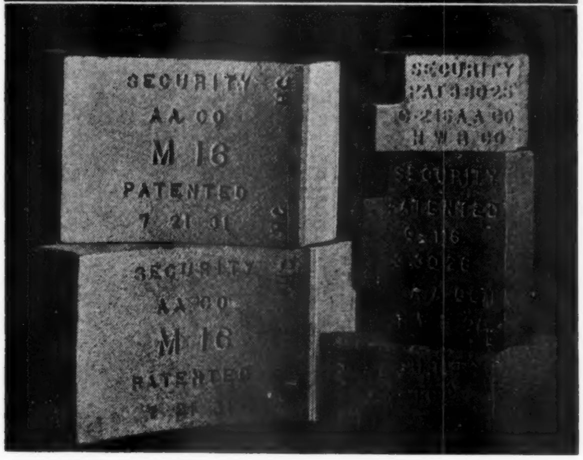
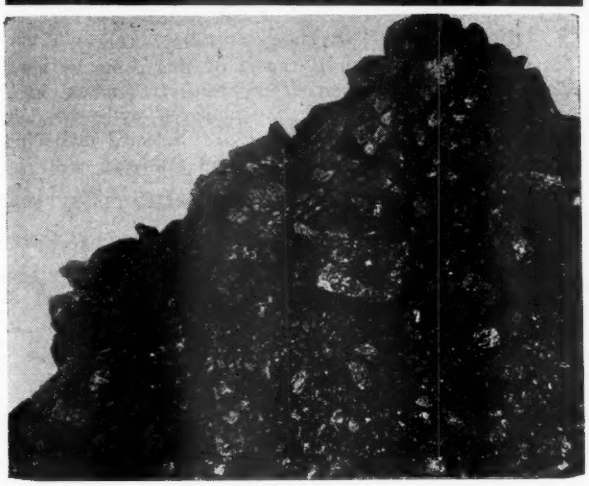
SPEND $1.00



TO SAVE $10.00



There's More To
SECURITY ARCHES
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WHEN you approve a requisition for Arch Brick you are not just buying supplies, you are in reality acquiring a means of saving fuel. Each dollar of Arch Brick saves ten dollars' worth of fuel.

In the effort to make the railroad dollar go further, lean heavily on those elements such as the locomotive Arch that have proved their ability to save money. See that they are maintained 100% so that they give all the economy of which they are capable.

In this direction lies the maximum economy of operation.

HARBISON-WALKER REFRACTORIES CO.
Refractory Specialists

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Net Revenue from Operations	9,893,574	21,801,501	-11,907,927
Railway tax accruals	6,697,424	7,179,028	-481,604
Railway operating income	3,181,940	14,612,579	-11,430,639
Equipment rents—Net Dr.	1,513,915	1,454,238	+59,677
Joint facility rents—Net Dr.	377,474	488,921	-111,447
Net Railway Operating Income	1,290,551	12,669,420	-11,378,869
Non-operating income	5,096,092	12,110,637	-7,014,545
Gross Income	6,386,644	24,780,057	-18,393,414
Rent for leased roads	*87	151	-238
Interest on funded debt	18,933,207	18,992,022	-58,815
Total Deductions from Gross Income	19,792,082	19,454,150	+337,932
Net Income	†13,405,439	5,325,907	-18,731,346

*Credit
†Deficit

Gulf Coast Lines.—*Annual Report.*—The annual report of these lines for 1932 shows net deficit, after interest and other charges, of $1,674,109, as compared with net deficit of $1,122,422 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
Average Mileage Operated	1,816.28	1,832.95	-16.67
Railway Operating Revenues	$9,786,326	$13,435,533	-$3,649,207
Maintenance of way	1,330,274	2,150,979	-820,705
Maintenance of equipment	1,696,913	2,269,679	-572,766
Transportation	2,837,037	3,996,464	-1,159,427
Total Operating Expenses	7,008,827	9,891,993	-2,883,165
Operating ratio	71.62	73.63	-2.01
Net Revenue from Operations	2,777,499	3,543,541	-766,042
Railway tax accruals	592,210	732,153	-139,944
Railway operating income	2,174,236	2,800,466	-626,231
Hire of freight cars—Dr.	765,350	910,312	-144,963
Joint facility rents	357,448	317,359	+40,089
Net Railway Operating Income	1,003,601	1,426,290	-422,688
Non-operating income	122,457	116,585	+5,872
Gross Income	1,126,059	1,542,875	-416,817
Interest on funded debt	2,778,754	2,617,260	+161,494
Total Deductions from Gross Income	2,800,167	2,665,297	+134,870
Net Deficit	1,674,109	1,122,422	+551,687

Hillsboro & Northeastern—*R. F. C. Loan.*—This company has applied to the Reconstruction Finance Corporation for a loan of $15,000 for the purchase of a gasoline locomotive.

Louisville, Henderson & St. Louis.—*Recapture Order Vacated.*—The Interstate Commerce Commission has vacated its tentative recapture report and order affecting this company upon a finding that was operated as a part of the Louisville & Nashville system.

Nashville, Chattanooga & St. Louis.—*Annual Report.*—The 1932 annual report of this company shows net deficit, after interest and other charges, of $434,185, as compared with net deficit of $419,425 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
Average Mileage Operated	1,203.39	1,203.39	......
Railway Operating Revenues	$11,355,116	$15,140,254	-$3,785,138
Maintenance of way	1,598,448	2,527,323	-928,875
Maintenance of equipment	2,455,855	3,171,276	-715,421
Transportation	4,713,696	6,105,864	-1,392,168
Total Operating Expenses	10,151,895	13,580,865	-3,428,970
Operating ratio	89.40	89.70	-0.30
Net Revenue from Operations	1,203,221	1,559,389	-356,168
Railway tax accruals	405,979	590,550	-184,571
Railway operating income	788,976	966,455	-177,479
Equipment rents—Dr.	377,179	461,532	-84,353
Joint facility rents	303,457	317,291	-13,834
Net Railway Operating Income	715,254	822,215	-106,961
Non-operating income	434,200	355,996	+78,204
Gross Income	1,149,454	1,178,210	-28,756
Rent for leased roads	806,506	806,506	......
Interest on funded debt	718,836	729,426	-10,590
Total Deductions from Gross Income	1,583,639	1,597,636	-13,997
Net Deficit	434,185	419,425	+14,760

New York, Chicago & St. Louis.—*Annual Report.*—The 1932 annual report of this company shows net deficit, after interest and other charges, of $4,410,434, as compared with net deficit of $210,413 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
Railway Operating Revenues	$29,158,468	$36,551,359	-$7,392,891
Total Operating Expenses	22,106,727	28,317,786	-6,211,059
Net Revenue from Operations	7,051,741	8,233,573	-1,181,832
Railway tax accruals	1,970,186	2,476,821	-506,635
Railway operating income	5,072,496	5,750,237	-677,741
Equipment rents—Net Dr.	2,429,644	2,703,983	-274,339
Joint facility rents—Net Dr.	501,699	504,155	-2,457
Net Railway Operating Income	2,141,153	2,542,098	-400,945
Non-operating Income	1,428,273	5,082,997	-3,654,724
Gross Income	3,569,426	7,625,095	-4,055,669
Rent for leased roads	200,844	211,111	-10,267
Interest on funded debt	7,623,839	7,346,860	+276,979
Total Deductions from Gross Income	7,979,860	7,835,508	+144,352
Net Deficit	4,410,434	210,413	+4,200,022

Pere Marquette.—*Annual Report.*—The 1932 annual report of this company shows net deficit, after interest and other charges, of $3,044,611, as compared with net deficit of $1,863,081 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
Railway Operating Revenues	$21,461,277	$27,344,681	-$5,883,404
Maintenance of way	2,781,046	4,579,837	-1,798,791
Maintenance of equipment	4,831,296	5,395,088	-563,793
Transportation	8,576,430	10,960,999	-2,384,569
Total Operating Expenses	18,189,896	23,132,174	-4,942,278
Operating ratio	84.76	84.59	+.17
Net Revenue from Operations	3,271,381	4,212,507	-941,126
Railway tax accruals	1,573,636	1,745,196	-171,560
Railway operating income	1,671,494	2,460,172	-788,677
Equipment rents—Net	754,269	538,034	+216,235
Joint facility rents—Net	591,753	637,573	-45,820
Net Railway Operating Income	325,472	1,284,565	-959,092
Gross Income	803,319	1,891,391	-1,088,072
Rent for leased roads	97,606	98,878	-1,273
Interest on debt	3,629,625	3,596,037	+33,588
Total Deductions from Gross Income	3,847,929	3,754,472	+93,457
Net Deficit	3,044,611	1,863,081	+1,182,313

Pere Marquette.—*R. F. C. Loan.*—This company has applied to the Reconstruction Finance Corporation for a loan of $2,000,000 for interest and taxes.

Rutland. — *Annual Report.* — The 1932 annual report of this company shows net deficit, after interest and other charges, of $41,460, as compared with net deficit of $101,128 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
Average Mileage Operated	413.03	413.03	
Railway Operating Revenues	$3,870,106	$4,541,812	-$671,706
Total Operating Expenses	3,363,500	4,076,185	-712,685
Operating ratio	86.91	89.75	-2.84
Net Revenue from Operations	506,606	465,627	+40,979
Railway tax accruals	248,067	268,424	-20,357
Railway Operating income	257,754	197,125	+60,629
Equipment rents—Net Cr.	19,068	16,719	+2,349
Joint facility rents—Net Cr.	29,889	40,397	-10,509
Net Railway Operating Income	306,711	254,242	+52,469
Non-operating income	86,500	94,029	-7,529
Gross Income	393,212	348,272	+44,940
Rent for leased roads	19,000	19,000	
Interest on funded debt	406,491	409,241	-2,750
Total Deductions from Gross Income	434,671	449,399	-14,728
Net Deficit	41,460	101,128	-59,668

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READING.—*Seeks to Regain C. of N. J. Stock.*—This company has applied to the Interstate Commerce Commission for authority to acquire control of the Central of New Jersey by regaining ownership of 145,000 shares of its stock, a majority, which was originally acquired in 1901 but which was transferred in 1921 to a trustee appointed pursuant to the decree of the federal district court for the eastern district of Pennsylvania in the Reading coal trust litigation which provided that final disposition of the stock should be postponed pending the development of the Interstate Commerce Commission's consolidation plan. The commission's plan allocates the C. of N. J. to the Reading and places both of them in the proposed Baltimore & Ohio system and the Reading now proposes to obtain an order of the court for a transfer of the shares to it.

SAN ANTONIO, UVALDE & GULF.—*Abandonment.*—Examiner Thomas F. Sullivan of the Interstate Commerce Commission has recommended in a proposed report that the commission authorize the abandonment of the line from Gardendale, Tex., to Fowlerton, 28.07 miles.

SOUTHERN PACIFIC—*R. F. C. Loan.*—Conditions surrounding the two loans from the Reconstruction Finance Corporation which the Interstate Commerce Commission has approved were discussed at a conference on May 15 between Jesse H. Jones, chairman of the corporation, A. A. Berle special adviser, and Hale Holden, Paul Shoup and Angus McDonald, respectively chairman of the board, vice-chairman and president of the Southern Pacific. The loans include one for $22,000,000 to meet equipment trust maturities, interest on funded debt and judgments due by January 1, 1934 and the other for $1,200,000 to erect a new terminal station at Houston. According to the estimates made in connection with the Houston station project the proposed loan will enable the Southern Pacific to provide 701,302 man-hours of employment in thirty crafts and complete a project on which $1,184,576 already has been spent by the railroad for land, sewer works, streets and under crossings. The security offered is to consist of $2,000,000 Southern Pacific San Francisco Terminal 4 per cent bonds of 1950 and $1,074,000 Southern Pacific Railroad Company first refunding mortgage 4 per cent guaranteed bonds 1955. Security for the $22,000,000 loan is to consist of $12,000,000 Pacific Fruit Express capital stock, $12,800,000 Arizona Eastern first and refunding mortgage 5 per cent bonds 1980, $4,737,050 El Paso & Southwestern first and refunding 5 per cent bonds 1965, and $9,000,000 Galveston, Harrisburg & San Antonio first mortgage 6 per cent bonds 1940.

WESTERN MARYLAND.—*Annual Report.*—The 1932 annual report of this company shows net income, after interest and other charges, of $612,893, as compared with net income of $1,011,012 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
RAILWAY OPERATING REVENUES	$12,081,684	$14,811,053	−$2,729,368
TOTAL OPERATING EXPENSES	7,521,365	9,647,901	−2,126,537
Operating ratio	62.25	65.14	−2.89
NET REVENUE FROM OPERATIONS	4,560,319	5,163,151	−602,832
Railway tax accruals	780,213	843,366	−63,153
Railway operating income	3,776,999	4,319,489	−542,490
Hire of Equipment—Net	123,690	220,477	−96,787
NET RAILWAY OPERATING INCOME	3,714,863	4,343,198	−628,335
Non-operating income	138,726	129,534	+9,192
GROSS INCOME	3,853,590	4,472,732	−619,142
Rent for leased roads	51,330	74,171	−22,841
Interest on funded debt	2,674,188	2,660,123	+14,065
TOTAL DEDUCTIONS FROM GROSS INCOME	3,240,697	3,461,720	−221,023
NET INCOME	612,893	1,011,012	−398,119

WHEELING & LAKE ERIE.—*Annual Report.*—The 1932 annual report of this company shows net income, after interest and other charges, of $435,084, as compared with net income of $753,743 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
RAILWAY OPERATING REVENUES	$8,536,235	$11,617,713	−$3,081,478
TOTAL OPERATING EXPENSES	6,468,267	9,256,066	−2,787,799
Operating ratio	75.77	79.67	−3.90
NET REVENUE FROM OPERATIONS	2,067,968	2,361,647	−293,679
Railway tax accruals	929,289	1,115,289	−186,000
Railway operating Income	1,138,307	1,246,933	−108,626
Hire of freight cars—Dr.	268,601	104,689	+163,912
Joint facility rents	15,160	14,267	+893
Non-operating income	411,814	497,677	−85,863
GROSS INCOME	1,550,120	1,744,610	−194,490
Interest on funded debt	738,328	765,128	−26,800
TOTAL DEDUCTIONS FROM GROSS INCOME	1,115,036	990,866	+124,170
NET INCOME	435,084	753,743	−318,659

Average Prices of Stocks and of Bonds

	May 16	Last week	Last year
Average price of 20 representative railway stocks..	34.96	31.82	15.55
Average price of 20 representative railway bonds..	62.72	60.31	52.99

Dividends Declared

Alabama Great Southern.—Preferred dividend action deferred.

Lackawanna R. R. of New Jersey.—4 Per Cent Guaranteed, $1.00, quarterly, payable July 1 to holders of record June 8.

Morris & Essex.—4¼ per cent, semi-annually, payable July 1 to holders of record June 9.

New York, Lackawanna & Western.—5 Per Cent Guaranteed, $1.25, quarterly, payable July 1 to holders of record June 15.

North Pennsylvania.—$1.00, quarterly, payable May 25 to holders of record May 19.

Pittsburgh, Bessemer & Lake Erie.—6 Per Cent Preferred, $1.50, semi-annually, payable June 1 to holders of record May 15.

Sussex.—50c, semi-annually, payable July 1 to holders of record June 17.

Union Pacific.—Common, $1.50, quarterly, payable July 1 to holders of record June 1.

Railway Officers

EXECUTIVE

W. C. Hull, assistant vice-president in charge of traffic of the Chesapeake & Ohio, has moved his headquarters from Richmond, Va., to Cleveland, Ohio.

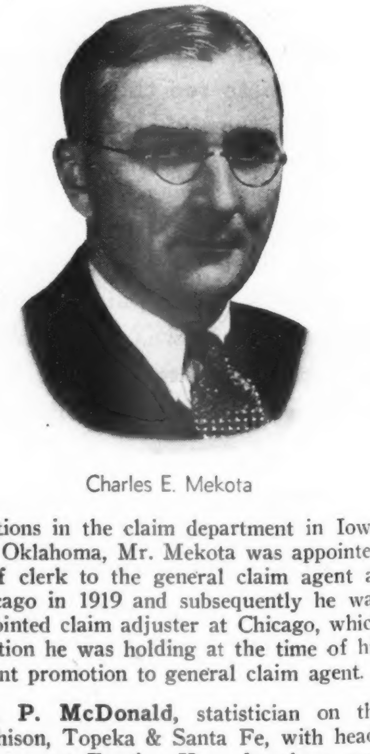
Charles W. Brown, general manager of the Western Maryland, has also been appointed vice-president. **E. R. Bardgett,** general traffic manager has been appointed vice-president, traffic, and his former position has been abolished.

FINANCIAL, LEGAL AND ACCOUNTING

James G. Blaine, a former judge of the St. Louis, Mo., City Court, has been appointed assistant general attorney for the Missouri-Kansas-Texas at St. Louis.

E. E. Fairweather has been appointed acting chief counsel for the Canadian National System. Mr. Fairweather has been in charge of the legal department of that road since the retirement of **Gerard Ruel** and his title was formerly general executive assistant and counsel.

Charles E. Mekota, who has been appointed general claim agent of the Chicago, Rock Island & Pacific, as noted in the *Railway Age* of May 13, has been connected with the claim department of the Chicago, Rock Island & Pacific continuously for 26 years. He was born on June 26, 1889, at Solon, Iowa, and entered the service of the Rock Island in 1907 as a clerk in the claim department at Cedar Rapids, Iowa. After occupying various



Charles E. Mekota

positions in the claim department in Iowa and Oklahoma, Mr. Mekota was appointed chief clerk to the general claim agent at Chicago in 1919 and subsequently he was appointed claim adjuster at Chicago, which position he was holding at the time of his recent promotion to general claim agent.

J. P. McDonald, statistician on the Atchison, Topeka & Santa Fe, with headquarters at Topeka, Kan., has been pro-

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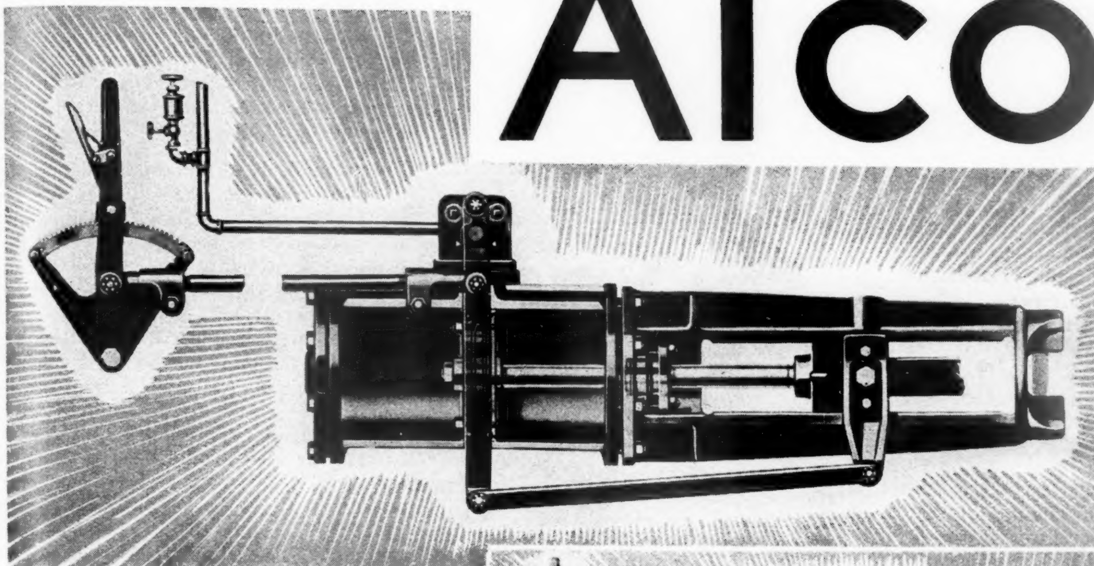
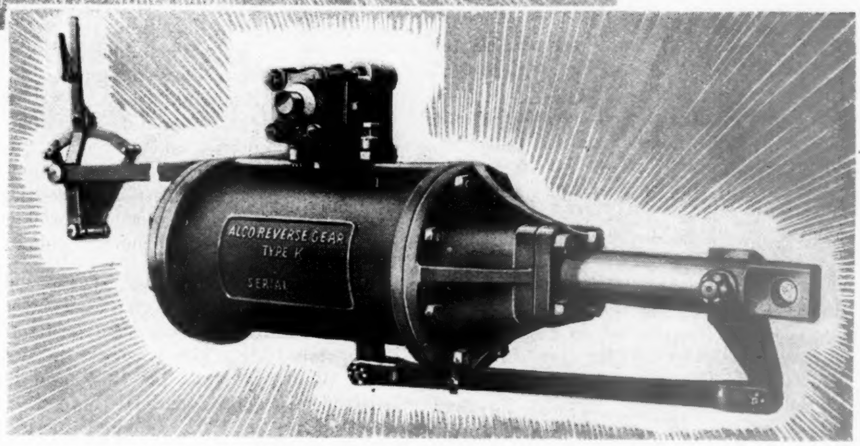
Alco





REVERSE GEAR FACTS

Both gears are designed for air and steam operation.

A separate check valve for the air and steam connections is built in the body of the control valve.

The type "K" gear is approximately 10″ shorter than the type "G" gear, permitting application where a gear with guides can not be used.

The valve, reverse lever, and as many parts as possible of the type "G" gear are incorporated in the type "K" gear. And in both gears, all repair parts interchange with corresponding parts furnished with original gears.

All Alco Gears are simple, accurate, easily maintained, and reasonably priced.

American Locomotive Company

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moted to auditor of disbursements of the Eastern and Western Lines, with the same headquarters, to succeed **Walter E. Davis,** promoted. **C. O. Clark,** chief clerk in the accounting department at Topeka, has been appointed to the newly-created position of assistant auditor of disbursements. The position of statistician has been abolished and Mr. McDonald will retain jurisdiction over the statistical department.

E. M. Thomas, comptroller of the Chesapeake & Ohio, with headquarters at Cleveland, Ohio, has been appointed also to the same position on the New York, Chicago & St. Louis (the Nickel Plate), and **Lewis A. Bell,** comptroller of the Nickel Plate, has been appointed assistant comptroller, with headquarters as before at Cleveland. **G. A. Wallis** has been appointed auditor of disbursements of the Nickel Plate at Cleveland, and **C. H. Sellmann,** auditor of freight accounts, has been appointed auditor of revenues, with headquarters also at Cleveland.

Walter E. Davis, who has been appointed assistant general auditor of the Atchison, Topeka & Santa Fe, with headquarters at Chicago, as noted in the *Railway Age* of May 6, was born on October 21, 1883, at Bala, Kan. He first entered railway service with the Santa Fe in July, 1902, in the stores department at Topeka, Kan., where he remained until April, 1904, when he left railway service to become storekeeper of the Federal Lead Company at Flat River, Mo. Mr. Davis returned to the Santa Fe in March, 1905, and served as a clerk in the offices of the motive power accountant and auditor of disbursements at Topeka until March 1, 1909, when he was transferred to the office of the general auditor at Chicago. In April, 1918, he was appointed chief clerk to the general auditor, which position he held

Walter E. Davis

until November, 1926, then being appointed acting auditor of disbursements at Topeka. Mr. Davis was appointed auditor of disbursements of the Eastern Lines, at Topeka, in December, 1928, which position he was holding at the time of his recent appointment as assistant general auditor.

Charles H. Woods, who has been appointed general solicitor of the Atchison, Topeka & Santa Fe, with headquarters at Chicago, as announced in the *Railway Age* of May 6, has been connected with the legal department of the Santa Fe for 30 years. He was born on June 24, 1876, at Chillicothe, Ohio, and received his legal

C. H. Woods

education at Ohio State University. Mr. Woods began the practice of law in 1900 at Guthrie, Okla., and in 1903 he became connected with the law department of the Santa Fe as an assistant attorney. He held this position and carried on a law practice at Oklahoma City, Okla., until 1918, when he was appointed assistant to the general counsel of the Santa Fe at Chicago. In 1920 Mr. Woods was advanced to general attorney at Chicago, which position he continued to hold until his recent promotion to general solicitor.

E. G. Smith, treasurer of the Union Pacific has also been elected secretary succeeding **Thomas Price,** who has retired on pension. Mr. Price was born at Wrexham, Wales, on July 14, 1874, and there received his education. He entered railroad service in 1907, as chief clerk and secretary to the president of the Union Pacific system. In 1913, he was appointed assistant secretary, and in 1917, he was promoted to secretary, the position from which he retires. Mr. Smith was born at Buffalo, N. Y., on May 11, 1886, and is a graduate of New York Law School, LL.B. degree, 1909, and New York University LL.M. degree, 1910. He entered railroad service in 1903 with the New York Central at Buffalo, N. Y., and continued with that road until 1907, when he became connected with the Union Pacific as stenographer at New York. In 1910, he was appointed cashier; in 1919, assistant treasurer, and the following year he was promoted to treasurer.

OPERATING

E. A. Sollit, general superintendent of the Wabash, with headquarters at St. Louis, Mo., has been granted an indefinite leave of absence because of ill health and the position of general superintendent has been abolished.

J. W. Rea, executive representative of the Missouri Pacific at Little Rock, Ark., has been appointed superintendent of the Arkansas division, with the same headquarters, to succeed **W. E. Lamb,** who has been transferred to the Omaha and Northern Kansas divisions, with headquarters at Falls City, Neb. Mr. Lamb replaces **J. Davis,** who has been appointed district engineer at Little Rock. **R. M. Smith,** division engineer of the Southern Kansas and Central divisions, with headquarters at Coffeyville, Kan., has been appointed assistant superintendent of the Colorado division, with headquarters at Pueblo, Colo, to succeed **E. Sullivan,** who has been appointed district engineer at Kansas City, Mo.

Watson S. Hall, superintendent of the Brandon division of the Canadian Pacific, with headquarters at Brandon, Man., has been promoted to general superintendent of the Saskatchewan district, with headquarters at Moose Jaw, Sask., to succeed **E. D. Cotterell,** who has been transferred to the Alberta district, with headquarters at Calgary, Alta. Mr. Cotterell replaces **W. A. Mather,** who has been promoted to assistant to vice-president at Montreal, Que., as noted in the *Railway Age* of May 13. **W. E. Kingston,** superintendent of the Portage division, with headquarters at Winnipeg, Man., has been transferred to the Brandon division to succeed Mr. Hall, and **A. A. Dunphy,** assistant superintendent of the Kenora division, with headquarters at Ignace, Ont., has been promoted to superintendent of the Portage division to replace Mr. Kingston. **A. R. Everts,** a train conductor on the Moose Jaw division, has been promoted to assistant superintendent at Ignace to succeed Mr. Dunphy.

H. J. Humphrey, assistant to vice-president of the Canadian Pacific, who has been appointed general manager Eastern lines, with headquarters at Montreal, Que., entered railway service as a telegraph operator on the Intercolonial Railway (now Canadian National) in 1896. The following year he became a telegraph operator

H. J. Humphrey

on the Boston & Maine, returning to the Intercolonial in the same capacity in 1901. In 1902, Mr. Humphrey entered the service of the Canadian Pacific as a telegraph operator, being advanced successively to train dispatcher, chief train dispatcher, and car service and fuel agent of the Saskatchewan district. In 1915, he was promoted to superintendent of car service of the Western lines, with headquarters at Winnipeg, Man. In 1916, he was appointed

Continued on next left-hand page

car service and fuel agent of the Eastern lines, with headquarters at Montreal, and after a few months in this position he became superintendent, with headquarters at Farnham, Que., being transferred later to Montreal, Brownville Junction, Me., and Toronto. In August, 1922, he was appointed assistant general superintendent of the Ontario district, with headquarters at Toronto. Mr. Humphrey was promoted to general superintendent of the Algoma district, with headquarters at North Bay, Ont., in March, 1924, and in October, 1927, he became assistant to the vice-president, the position he held until his recent promotion.

TRAFFIC

T. R. Patton, assistant general passenger agent of the Erie, has had his headquarters moved from Cleveland, Ohio, to Youngstown.

L. B. Smith has been appointed eastern traffic manager of the Southern and **F. J. Muckenhaupt, M. Ellingsworth** and **William J. Wilkins** have been appointed district freight and passenger agents. All will have headquarters at New York.

J. H. Carroll, Jr., freight traffic manager of the Baltimore & Ohio, at Chicago, has been appointed to the newly-created position of western freight traffic manager with the same headquarters, in which position he will also have jurisdiction over the Alton.

ENGINEERING AND SIGNALING

J. Davis, superintendent of the Omaha and Northern Kansas divisions of the Missouri Pacific, with headquarters at Falls City, Neb., has been appointed to the newly-created position of district engineer of the Southern district, with headquarters at Little Rock, Ark. **E. Sullivan,** assistant superintendent at Pueblo, Colo., has been appointed to the newly-created position of district engineer of the Western district, with headquarters at Kansas City, Mo. **R. G. Bush,** assistant engineer, with headquarters at Kansas City, has been promoted to division engineer of the Southern Kansas and Central divisions, with headquarters at Coffeyville, Kan., to succeed **R. M. Smith,** who has been appointed assistant superintendent at Pueblo, Colo.

Robert A. Rutledge, district engineer on the Western Lines of the Atchison, Topeka & Santa Fe, with headquarters at Amarillo, Tex., has retired after 36 years of continuous service with the Santa Fe. Mr. Rutledge was born on December 13, 1863, at Jamestown, Pa., and was educated in civil engineering at the University of Kansas. He entered the service of the Gulf, Colorado & Santa Fe in 1897 as an instrumentman and was promoted successively through the positions of assistant engineer, division engineer and district engineer. In 1913, he went with the Santa Fe as chief engineer of the Eastern Lines, with headquarters at Topeka, Kan., and in 1917 he was appointed district engineer of the Western Lines at Amarillo, the position he was holding at the time of his retirement.

MECHANICAL

A. J. Krueger, master car builder of the New York, Chicago & St. Louis, has had his headquarters moved from Cleveland, Ohio, to Conneaut, Ohio.

OBITUARY

A. C. Holley, tie and lumber agent of the Delaware & Hudson, at Albany, N. Y., died on May 7.

Thomas M. Pullen, master mechanic of the Columbus & Greenville, with headquarters at Columbus, Miss., died on May 4, at Columbus of a heart attack.

Joseph T. Richards, formerly consulting engineer, maintenance of way of the Pennsylvania, died suddenly at his home in Cape May, N. J., on May 17. Mr. Richards was 88 years of age.

George F. Mockler, until recently director of public relations of the Terminal Railroad Association of St. Louis, Mo., died of heart disease in the Missouri Pacific Hospital at St. Louis on May 9.

Philip T. White, assistant general manager of the Cleveland, Cincinnati, Chicago & St. Louis, with headquarters at Cincinnati, Ohio, died at his home in that city on May 14, following an operation for appendicitis.

Edward S. Giles, general coal freight agent for the Delaware, Lackawanna & Western, with headquarters at New York, died suddenly of a heart attack on May 14, at his home in Paterson, N. J. Mr. Giles was born in Plainwell, Mich., 59 years ago; and had been associated with the D. L. & W., for 43 years.

Raymond DuPuy, formerly president of the Virginian, died at Palm Beach, Fla., on May 14, after an illness of several months. He was born at Pittsburgh, Pa., on January 4, 1860, and was educated at Georgetown University. Mr.DuPuy commenced his railway career with the Missouri-Kansas-Texas in 1877, and retired as president of the Virginian on May 15, 1917.

O. M. Lavoie, superintendent of the Laurentians division of the Canadian Pacific, died on May 12, following an operation for appendicitis. Mr. Lavoie was born on October 16, 1882, at Drummondville, Que., and entered railroad service as a telegraph operator at St. John, N. B., in September, 1902. He was advanced to superintendent of the Laurentians division in August, 1919, the position he held until his death.

John M. Scott, who retired in 1928 as assistant passenger traffic manager on the Southern Pacific, at Portland, Ore., died on May 8, following a long illness. At the time of his retirement, Mr. Scott had been in railroad service for 43 years, of which 27 years had been spent in the service of the Southern Pacific. He was born at Inverness, Scotland, on September 1, 1864, and entered railway service in 1885 with the Grand Trunk at Montreal, Quebec, where he remained until 1888, when he came to the United States and became connected with the Chicago, Burlington & Quincy at Omaha, Neb. In 1891 Mr. Scott went with the Missouri Pacific at St. Louis, Mo., and two years later he left this company to go with the Union Pacific at Omaha. In 1901 he was appointed chief passenger clerk to the traffic director of the Harriman Lines—the Union Pacific and the Southern Pacific—at Chicago, being promoted to assistant passenger traffic agent of the Southern Pacific at Portland in 1906. Mr. Scott was advanced to general passenger agent at Portland in 1911, and 12 years later he was promoted to assistant passenger traffic manager, which position he held until his retirement.

Samuel House, freight traffic manager of the Baltimore & Ohio, died suddenly May 11, of a heart attack at his home in Baltimore, Md. Mr. House was born in Franklin, Tenn., on September 23, 1884. All of his railroad experience has been in the general offices of the Baltimore & Ohio at Baltimore, where he started in the freight claim department on May 28, 1901, and was successively in the general freight department as rate clerk, chief rate clerk, chief clerk, assistant general freight agent, general freight agent and assistant general freight traffic manager. He was appointed freight traffic manager in July, 1930, the position he held until his death.

Samuel House

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From "The American Transportation Problem" by Dr. H. G. Moulton and Associates